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NORMAL SCHOOL, OTTAWA.

PREFACE.

The Fourth Convention of the Dominion Educational Association was held in Ottawa, August 14—16th, 1901.

The public meetings of the Association were held in the Assembly Hall of the Normal School; and the different sections were called to order in the lecture Halls of this institution. By assembling the various departments in the same building, greater expediency and order in the work of the Convention were thus effected.

The attendance at the sessions of the different sections was considerably less than that of some previous meetings of this Association. The reason of this is two-fold. The railway rates to Ottawa were not so reduced as to induce a large number of delegates to come and secondly, it became apparent that the date of meeting was unsuitable to many intending delegates, especially in view of the other attractions that commanded the attention and pre-occupied the time of our teachers during the holiday season of 1901. But even if such influences militated against the personal attendance of a large body of delegates, the excellence of the programme prepared for the convention more than compensated for the comparatively small number present.

The papers read before the various sections were marked by originality, ability and profound knowledge of the theory and practise of education; and were of practical value to members of the Association.

At the close of our meeting in Ottawa, Mr. J. T. Bowerman, the Secretary of the Association, was obliged on account of ill-health and the pressure of school duties to tender his resignation which was duly accepted by the Board of Directors. At the request of Dr. J. A. MacCabe and President-elect Dr. D. J. Goggin, I assumed the responsibilities of the Secretaryship and prepared for the issue of the fourth Report of this Association.

In this connection, I desire to acknowledge the kindness of Dr. MacCabe to whom I am indebted for many courtesies whilst in the discharge of the duties of my office.

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I would recommend that hereafter the writer of a paper should furnish with his copy two type-written synopses for the use of the correspondents who report the proceedings of the Convention.

MICHAEL E. CONWAY,

Acting Secretary.

Ottawa, November 1st, 1901.

CONSTITUTION OF THE DOMINION EDUCATIONAL ASSOCIATION.

ARTICLE I.—NAME.

This Association shall be styled the Dominion Educational Association.

ARTICLE II.—DEPARTMENTS.

Sec. 1. It shall consist of seven departments—Elementary, Higher Education, Inspection and Training, Kindergarten, Industrial Education, Art Education, Musical Education.

Sec. 2. Other departments may be organized in the manner prescribed in this Constitution.

ARTICLE III.—MEMBERSHIP.

Sec. 1. Any person interested in the work of education shall be eligible for membership and may continue a member by the payment of one dollar at the general meeting or convention. On neglect to pay such fee the membership shall cease.

Sec. 2. Each department may prescribe its own conditions of membership, provided that no person be admitted to such membership who is not a member of the general Association.

Sec. 3. Any person eligible to membership may become a Life member by paying at once ten dollars.

Article IV.—Officers.

Sec. 1. The officers of this Association shall be a President, one Vice-President for each Province and Territory represented in the Association, a Secretary, a Treasurer, eight Directors, and the presiding officers of the several departments.

Sec. 2. The President, Vice-Presidents, Secretary, Treasurer, Directors, and Presiding officers of their respective departments shall constitute the Board of Directors, and as such shall have power to appoint such committees from their own number as they shall deem expedient. The Board of Directors shall be enlarged by representatives chosen by the Provincial Associations or by the Council or Board of Education of any Province where such an Association has not yet been organized. *(Amendment to Constitution, Ottawa, 1901.)*

Sec. 3. The elective officers of the Association shall be chosen by ballot unless otherwise ordered by the meeting on the third day of the Convention, the majority of votes being necessary for the choice. They shall assume office not later than the first day of January following the convention.

Sec. 4. Each department shall be administered by a President, Vice-President, Secretary, and such other officers as it shall deem necessary to conduct its affairs.

Sec. 5. The President shall preside at all meetings of the Association and of the Board of Directors, and shall perform the duties usually devolving upon a presiding officer. In his absence, a Vice-President shall preside; and in the absence of all Vice-Presidents a *pro tempore* chairman shall be appointed on nomination, the Secretary putting the question.

Sec. 6. The Secretary shall keep a full and accurate report of the proceedings of the general meetings of the Association and all meetings of the Board of Directors, and shall conduct such correspondence as the Directors may assign, and shall have his records present at all meetings of the Association and at the Board of Directors. The Secretary of each department shall, in addition to performing the duties usually pertaining to his office, keep a list of the members of his department.

Sec. 7. The Treasurer shall receive, and under the direction of the Board of Directors shall hold in safe keeping, all moneys paid to the Association, shall expend the same only upon the order of the Board; shall keep an exact account of his receipts and expenditures, a full statement of which he shall, on retiring from office, submit to the Board of Directors. The Treasurer shall give such bonds for the faithful discharge of his duties as may be required by the Board of Directors.

Sec. 8. The Board of Directors shall have power to fill all vacancies in their own body;[1] shall have in charge the general interests of the Association; and shall make all necessary arrangements for its meetings. Upon the written application of ten members of the Association for permission to establish a new department they may grant such permission. Such new department shall in all respects be entitled to the same rights and privileges as others. The formation of such department shall in effect be a sufficient amendment to this Constitution for the insertion of its name in Article II., and the Secretary shall make the necessary alterations.

Article V.—Meetings.

Sec. 1. The meetings of the Association shall be held at such times and places as shall be determined by the Board of Directors, provided that not more than three years shall intervene between two general meetings or conventions.

Sec. 2. Special meetings may be called by the President at the request of ten members of the Board of Directors.

Sec, 3. Any Department of the Association may hold a Special meeting at such time and place as by its own regulations it shall appoint, provided that the expense of such meeting shall not be a charge upon the funds of the Association, without the order of the Association.

Sec. 4. The Board of Directors shall hold their regular meetings during the convention.

Sec. 5. Special meetings of the Board of Directors may be held at such other times and places as the Board or the President, with the concurrence of five other members of the Board, shall determine.

Sec, 6. Each new Board shall organize at the session of its election. At its first meeting a Committee on Publication shall be appointed, which shall consist of the President and Secretary of the Association for the previous year, and one member from each Department.

Article VI.—By-Laws.

By-laws not inconsistent with this Constitution may be adopted by a two-thirds vote of the Association.

Article VII.—Amendments.

This Constitution may be altered or amended at a regular meeting by the unanimous vote of the members present, or by a two-thirds vote of the members present, provided that the alteration or amendment has been proposed in writing at a previous regular meeting.

By-Laws.

1. At each regular meeting of the Association there shall be appointed a Committee on Nominations, one on Honorary Members, and one on Resolutions.

2. The President and Secretary shall certify to the Treasurer all bills approved by the Board of Directors.

3. Each member of the Association shall be entitled to a copy of its proceedings.

4. No paper, lecture or address shall be read before the Association or any of its departments in the absence of its author, nor shall any such paper, lecture or address be published in its volume of Proceedings without the consent of the Board of Directors.

CONSTITUTION DE L'ASSOCIATION D'EDUCATION DU CANADA.

Article I.—Nom.

Cette Association portera le nom suivant : Association d'Education du Dominion du Canada.

Article II.—Départements.

1 ère Divis. L'Association comprendra sept départements : l'Élémentaire, l'Éducation Supériéure, l'Inspection et Enseignant, le "Kindergarten," l'Éducation Industrielle, l'Éducation Artistique et l'Éducation Musicale.

2 de Divis. On pourra organiser d'autres départements de la manière prescrite par cette Constitution.

Article III.—Affiliation.

1 ère Divis. Toute personne intéressée au progès de l'éducation pourra devenir membre de l'association en versant la somme d'un dollar à la réunion généralé ou convention ; et elle pourra continuer son affiliation en versant la même somme (un dollar), annuellement. Elle cessera d'être membre dès qu'elle négligera de payer cette contribution.

2de Divis. Chaque département pourra prescrire ses propres conditions d'affiliation. Une personne ne pourra être affiliée, cependant, que lorsqu'elle est déjà membre de l'Association générale.

3me Divis. Toute personne éligible à la position de membre pourra devenir membre à vie en payant, une fois pour toutes, la somme de dix dollars.

ARTICLE IV.—OFFICERS.

1 ère Divis. Les officers de cette Association seront : un Président, un Vice-Président pour chaque province et territoire représentés à l'Association, un Secrétaire, un Trésorier, huit Directeurs et les Présidents des divers départements.

2me Divis. Le Président, le Vice-Président, le Secrétaire, le Trésorier, les Directeurs et les Présidents des divers départements constituront le Bureau des Directeurs, et, en cette qualité, ils auront le pouvoir de former des comités dont les membres seront choisis parmi eux, selon qu'ils le jugeront à propos. L'Executif sera augmenté par les representants élus par l'Association provinciale ou par le Conseil ou Bureau de l'Education où une telle Association n'a pas été encore organisé.

3me Divis. A moins d'ordre contraire de la part de l'assemblée, les officers de l'Association seront élus par voie de scrutin, le troisième jour de la réunion; la pluralilté des votes décidera le choix. Ils entreront en charge le premier Janvier à dater de la réunion.

4me Divis. Chaque département sera adminstré par un Président, un Vice-Président, un Secrétaire et par tout officier jugé nécessaire à l'administration de ses affaires.

5me Divis. Le Président présidera toutes les assemblées de l'Association et celles du Bureau des Directeurs, et accomplira les devoirs appartenant ordinairement à un Président. En son absence un Vice-Président présidera; et en l'absence de tous les Vice-Présidents on nommer ra un Président temporaire, après mise aux voix des noms des candidats par le Secrétaire.

6me Divis. Le Secrétaire devra garder un rapport complet et exact des délibérations des assemblées générales de l'Association

et de toutes les assemblées du Bureau des Directeurs, et se chargera de toute correspondance qui lui pourra être confiée par les Directeurs, et il devra apporter avec lui ses registres à toutes les réunions de l'Association et du Bureau des Directeurs. Le Secrétaire de chaque département devra accomplir les devoirs appartenant ordinairement à sa charge, et, en outre conserver une liste des noms des membres de son département.

7me Divis. Le Trésorier devra percevoir, d'après les instructions du Bureau des Directeurs, tous les deniers payés à l'Association, les placer en garde sûre, et les employer seulement d'après l'ordre du dit Bureau ; il tiendra un compte fidèle de ses recettes et de ses dépenses, il en fournira, au sortir de fonctions, un relevé complet au Bureau des Directeurs. Le Trésorier donnera toutes les garanties que pourra exiger le Bureau des Directeurs concernant le fidèle accomplissement de ses devoirs.

8me Divis. Le Bureau des Directeurs aura le pouvoir de remplir les vacances survenant parmi ses propres membres ; il soignera les interêts généraux de l'Association, et verra à tous les arrangements nécessaires à ses assemblées. Il pourra décréter l'établissement d'un nouveau département sur demande écrite à cet effet de la part de dix membres de l'Association. Le nouveau département sera revêtu des mêmes droits et privilèges que les autres départements. La formation d'un tel département sera, par le fait même, un amendement suffisant à la constitution à l'effet d'inscrire son nom à l'Article II, et le Secrétaire devra faire les changements nécessaires à ce sujet.

Article V.—Assemblées.

1 ère Divis. Les assemblées de l'Association, se tiendront aux jours et lieux que déterminera le Bureau des Directeurs pourvu qu'il ne s'écoule pas plus de trois ans entre deux assemblées générales.

2me Divis. Sur demande de dix membres du Bureau des Directeurs le Président pourra convoquer des assemblées spéciales.

3me Divis. Tout département de l'Association pourra tenir une assemblée spéciale aux jours et lieux indiqués par ses propres reglements, pourvu que les dépenses de ces assemblées ne soient pas à la charge de l'Association sans un ordre de celle-ci.

4me Divis. Le Bureau des Directeurs devra tenir ses assemblées règulières pendant la convention.

5me Divis. Le Bureau des Directeurs pourra tenir des assemblées spéciales à des jours et lieux que le Bureau ou le Président pourra déterminer concurremment avec cinq autres membres du Bureau.

6me Divis. Chaque nouveau Bureau devra s'organiser à la session même de son election. A sa première assemblée on devra nommer un comité de publication, formé du Président et du Secrétaire de l'Association de l'année précédente et d'un membre de chaque département.

Article VI.—Règlements.

On pourra adopter, par deux tiers des votes des membres de l'Association, des règlements qui ne seront pas incompatibles avec cette constitution.

Article VII.—Amendements.

On pourra changer ou amender cette constitution à une assemblée regulière ou par le vote unanime des membres présents, ou par les deux tiers des votes des membres présents, pourvu que tel changement ou amendement ait été proposé par écrit à une assemblée regulière précédente.

Règlements.

1. A chaque assemblée regulière de l'Association on devra former un comité pour la nomination des officers, un pour la nomination des membres honoraires et un pour les résolutions.

2. Le Président et le Secrétaire devront certifier pour le Trésorier tout compte approuvé par le Bureau des Directeurs.

3. Chaque membre de l'Association aura droit à une copie des délibérations.

4. Il ne sera fait lecture d'aucun document, d'aucune conférence ou adresse devant l'Association ou aucun de ses départements en l'absence de son auteur; et l'insertion de tels documents, conférences ou adresses ne se fera pas au Régistre des Délibérations sans le consentement du Bureau des Directeurs.

The Dominion Educational Association.

OTTAWA, AUGUST 14th to 16th, 1901.

Outline Minutes of Proceedings of General Meetings.

WEDNESDAY, AUGUST 14TH.

EVENING.

The Fourth Convention of the Dominion Educational Association met at 8 p.m. in the Assembly Hall of the Normal School, Ottawa. Dr. John A. MacCabe in the chair. Letters of regret were read from Hon. G. W. Ross and Rev. Dr. Constantineau both of whom were unable to be present. Dr. MacCabe then introduced Mayor W. D. Morris who delivered the official welcome to the members of the Association.

Addresses in reply were delivered by the President, Dr. J. A. MacCabe, Principal Normal School, Ottawa; Hon. P. Boucher de la Bruere, Supt. of Public Instruction, Quebec; Dr. D. J. Goggin, Supt. of Education, North-West Territories; H. V. B. Bridges, M.A., Fredericton; G. R. Marshall, Halifax; Wm. Scott, B.A., Principal Normal School, Toronto; P. L. Gray, Esq., Inspector Manual Training, London, Eng.; Prof. J. W. Robertson, Commissioner of Agriculture, Ottawa.

On motion of Dr. Goggin and Principal Scott, it was agreed that Mr. George U. Hay (convener), Mr. Parmelee, Principal Henderson, Dr. Goggin and Principal Scott be a Committee on Nominations.

On motion of Dr. Goggin and Inspector Bridges, it was agreed that Principal Ellis, Mr. Marshall, Mr. Harstone, Professor Magnan and Dr. Bridges (convener) be a Committee on Resolutions.

The President announced that through the kindness of Professor Robertson the members of the Association would be given an opportunity of visiting the Government Experimental Farm and that the Ottawa Electric Railway Company would place cars at the disposal of the members to take them to the Experimental Farm, and afterwards for a ride around the city and to Britannia-on-the-Bay.

On motion of Mr. Harstone and Mr. Henderson, it was resolved that the thanks of the Association be conveyed to Professor Robertson of the Experimental Farm and to Mr. J. D. Fraser, Secretary of the Ottawa Electric Railway Company.

THURSDAY, AUGUST 15TH.

EVENING.

A General meeting of the Association was held in the Normal School Assembly Hall. The President, Dr. John A. MacCabe in the chair.

Mr. George U. Hay (convener) presented the report of the Nominating Committee which is as follows :

Place of meeting—Winnipeg.
Date " " —July, 1903.

OFFICERS.

President—D. J. Goggin, M.A., D.C.L. Regina.

Vice-Presidents—Hon. P. Boucher de la Bruere, D.C.L. Hon. Richard Harcourt, M.A., K.C. A. H. Mackay, B.A., B.Sc., LL.D., F.R.S.C. J. R. Inch, LL.D. Alexander Anderson, Esq. Hon. F. W. G. Haultain. Alex Robinson.

Directors.—Wm. Scott, Toronto; F. H. Schofield, Winnipeg; Dr. S. P. Robins, Montreal; G. W. Parmelee, Quebec; G. U. Hay, St. John, N.B.; Dr. J. Hall, Truro; Prof. Robertson, Charlottetown, F. H: Cowperthwaite, Vancouver.

Secretary.—W. A. MacIntyre, Winnipeg.

Treasurer.—J. T. Bowerman, Ottawa.

On motion of Inspector Knight and Principal Strang, the report of the Nominating Committee was adopted.

The President read a telegram from the Hon. Mr. Harcourt, Minister of Education for Ontario, expressing the regret that he could not attend the Convention and wishing the Association every success.

Dr. Robins, Principal of McGill Normal School, then read a paper on "The Desirability of Dominion Registration of Trained Teachers."

In the absence of Mrs. Clark Murray her paper on "Patriotism in Schools" was read by Dr. Harper.

Prof. C. J. Magnan, Laval Normal School, Quebec, read a paper entitled "Comment cultiver le Sentiment Nationale a l'Ecole Primaire."

Prof. J. W. Robertson addressed the meeting on "Manual Training."

Dr. Goggin gave notice of motion for the next General Meeting to the effect—

(1.) That it is desirable to test, under proper conditions, the educational value and practicability of certain recent departures in the course of study in Elementary Schools.

(2.) That a Committee consisting of
be appointed to devise plans for practical tests of these and other departures that may seem advisable and feasible.

On motion of Dr. Harper and Professor Magnan, the meeting then adjourned.

FRIDAY, AUGUST 16TH.

EVENING.

The meeting opened at 8:15 p.m., President J. A. McCabe in the chair.

Mr. G. U. Hay presented an oral report of the Committee appointed in 1898 to consider and report on the establishment of a

Central Bureau of Education for Canada. The Committee was instructed to continue—with the addition of the name of Dr. J. A. MacCabe—and to report at the next meeting in 1903.

It was moved by Dr. Harper seconded by Principal Truell—

"That as the Association is a representative one, the Executive shall be enlarged by representatives chosen by the Provincial Association or by the Council or Board of Education of any Province where such an Association has not yet been organized. Accredited delegates from all local Teachers' Associations or Institutions shall be allowed to sit at the meetings of the Executive when they are in session during the general meeting or convention.

Dr. Goggin feared that the second part of the motion would lead to a too bulky Executive. With the consent of the mover and seconder all words after "organized" were omitted.

The resolution as amended was carried.

The President read the names of the members of a Committee appointed at the Halifax meeting to consider and report on—

(1.) The universal use of the decimal system of weights and measures.

(2.) The simplification of English Orthography.

(3.) The general introduction of a distinctly legible phonetic shorthand.

As no member of the Committee was present the matter was laid over until the next meeting.

Mr. A. F. Newlands of Buffalo, N.Y., then read a paper on "Art Education." He also exhibited a large number of drawings by pupils in the different grades of High and Public Schools in the United States.

This paper was discussed by Principal Truell and Inspector Knight.

Dr. Harper read a paper on "A Dominion Educational Bureau." The Hon. Boucher de la Bruere, Superintendent of Public Instruction, Quebec, expressed himself as opposed to this plan.

Dr. Goggin moved, seconded by Dr. Sinclair (1) That it is desirable to test under proper conditions, the educational value and

practicability of certain recent departures in the courses of study in Elementary schools.

(2) That a committee consisting of Supt. D. MacIntyre, Winnipeg; Principal Scott, Toronto; Inspector Cowley, Ottawa; Dr. A. H. Mackay, Halifax; Inspector Carter, St. John; Dr. Inch, Fredericton; Professor Brittain, Fredericton; Dr. Anderson, Charlottetown; Principal Robertson, Charlottetown; Inspector Parker, Leeds, Quebec; Prof. C. J. Magnan, Laval Normal School, Quebec; and the mover and seconder be appointed to consider and devise plans for practical tests of these and other departures that may seem advisable, and to report at the next meeting.

(3) That Professor J. W. Robertson of Ottawa be invited to act in conjunction with this Committee.

Dr. Sinclair then withdrew his paper on "The Educational Exhibit at Paris" and spoke on Dr. Goggins motion.

Principal Ellis and Professor Magnan of the Committee on Resolutions reported recommending the adoption of the following resolutions:

1. In regard to the request presented by the Hon. Secretary on behalf of the "Daughters and Children of the British Empire," that one hour a month in every school be set apart for the teaching of patriotism, and a special programme prepared for that purpose, the Committee recommends no action.

2. That this Association expresses its entire sympathy with the efforts to extend the educational advantages to isolated labourers in the newer districts of Canada. That the action of employers in mines, on railroad construction works, pulpwood operations and lumbering generally, in volunteering to erect suitable buildings at their camps for reading, study and entertainment be heartily commended. And in view of the fact that a considerable proportion of the employers have been found unable to read or write, this Association urges Provincial Governments and the public generally to co-operate in providing, not only travelling libraries for these reading rooms, but also elementary instruction for those who cannot at present avail themselves of such privileges.

3. That in the matter of Dominion Registration, a Committee of four members be appointed to consider the subject and to report at the next meeting in Winnipeg; the Committee to consist of Dr. Goggin, Dr. McKay, Hon. P. Brucher de la Bruère, and the Minister of Education for Ontario.

4. That this Association endorses the request of the Toronto Principals' Association in regard to having the metric system of weights and measures made compulsory in Canada.

5. That the communication from the Women's Christian Temperance Union be endorsed in so far as the inculcating of temperance principles in the schools is concerned.

6. That the following report regarding teachers' salaries sent on from the Inspection and Training Section be endorsed by this Association.

To the Chairman of the Committee on Resolutions :—

A Committee consisting of Inspector Silcox, St. Thomas; Dr. Harper, Quebec; and Principal Scott, Toronto; was appointed from the Inspection and Training Section to consider a resolution by Inspector Silcox re Teachers' Salaries.

They reported to the Section as follows :

In view of the action taken by this Association at its last meeting, we as an Association suggest that the respective legislatures be approached in regard to granting a special bonus to those schools in which efficient teachers have been engaged for a continuous period of three years, at a salary which the respective legislatures consider ample.

That a copy of this report be sent to the various Provincial Associations for discussion and action and they to report to this Association at its next meeting in Winnipeg in 1903.

(Signed) S. SILCOX,
Convener of Committee.

On motion of Principal Ellis and Professor Magnan the report of the Committee on Resolutions was adopted.

Miss Hughes of St. Regis then addressed the meeting on the subject of Indian Schools. At the request of Dr. MacCabe, Dr. Goggin also spoke upon the same subject.

On motion of Principal Truell and Inspector Knight, a vote of thanks was presented to the retiring President, Dr. J. A. MacCabe; also to the authorities of the Normal School for granting the Association the use of the building for its meetings; and to the representatives of the Press for the manner in which they had reported the proceedings of the Convention.

On motion of Dr. Sinclair and Dr. Harper the meeting then adjourned.

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OFFICERS FOR 1901-1903.

President :

D. J. GOGGIN, M. A., D.C.L., Regina, N. W. T.

Vice-Presidents :

HON. P. BOUCHER DE LA BRUERE, D. C. L.,, Quebec.
HON. RICHARD HARCOURT, M. A., K. C., Toronto.
A. H. MACKAY, B. A., LL. D., Halifax.
J. R. INCH, LL. D., Fredericton.
ALEXANDER ANDERSON, LL. D., Charlottetown.
HON. A. CAMPBELL, Winnipeg.
HON. F. W. G. HAULTAIN, Regina, N.W.T.
ALEXANDER ROBINSON, M. A., Victoria.

Directors :

WM. SCOTT, B. A., Toronto.
F. H. SCHOFIELD, Winnipeg.
S. P. ROBINS, M. A., LL. D., Montreal.
G. W. PARMELEE, B. A., Quebec.
G. U. HAY, B. PH., F. R. S. C., St. John, N. B.
J. B. HALL, LL. D., Truro.
PROF. J. ROBERTSON, Charlottetown.
F. H. COWPERTHWAITE, ESQ., Vancouver.

Secretary :

W. A. MCINTYRE, B. A., Winnipeg.

Treasurer :

J. T. BOWERMAN, M. A., Ottawa.

Central Bureau of Education for Canada, ' The Committee was instructed to continue—with the addition of the name of Dr. J. A. MacCabe—and to report at the next meeting in 1903.

It was moved by Dr. Harper seconded by Principal Truell—

" That as the Association is a representative one, the Executive shall be enlarged by representatives chosen by the Provincial Association or by the Council or Board of Education of any Province where such an Association has not yet been organized. Accredited delegates from all local Teachers' Associations or Institutions shall be allowed to sit at the meetings of the Executive when they are in session during the general meeting or convention.

Dr. Goggin feared that the second part of the motion would lead to a too bulky Executive. With the consent of the mover and seconder all words after "organized" were omitted.

The resolution as amended was carried.

The President read the names of the members of a Committee appointed at the Halifax meeting to consider and report on—

(1.) The universal use of the decimal system of weights and measures.

(2.) The simplification of English Orthography.

(3.) The general introduction of a distinctly legible phonetic shorthand.

As no member of the Committee was present the matter was laid over until the next meeting.

Mr. A. F. Newlands of Buffalo, N.Y., then read a paper on "Art Education." He also exhibited a large number of drawings by pupils in the different grades of High and Public Schools in the United States.

This paper was discussed by Principal Truell and Inspector Knight.

Dr. Harper read a paper on "A Dominion Educational Bureau." The Hon. Boucher de la Bruere, Superintendent of Public Instruction, Quebec, expressed himself as opposed to this plan.

Dr. Goggin moved, seconded by Dr. Sinclair (1) That it is desirable to test under proper conditions, the educational value and

practicability of certain recent departures in the courses of study in Elementary schools.

(2) That a committee consisting of Supt. D. MacIntyre, Winnipeg; Principal Scott, Toronto; Inspector Cowley, Ottawa; Dr. A. H. Mackay, Halifax; Inspector Carter, St. John; Dr. Inch, Fredericton; Professor Brittain, Fredericton; Dr. Anderson, Charlottetown; Principal Robertson, Charlottetown; Inspector Parker, Leeds, Quebec; Prof. C. J. Magnan, Laval Normal School, Quebec; and the mover and seconder be appointed to consider and devise plans for practical tests of these and other departures that may seem advisable, and to report at the next meeting.

(3) That Professor J. W. Robertson of Ottawa be invited to act in conjunction with this Committee.

Dr. Sinclair then withdrew his paper on "The Educational Exhibit at Paris" and spoke on Dr. Goggins motion.

Principal Ellis and Professor Magnan of the Committee on Resolutions reported recommending the adoption of the following resolutions:

1. In regard to the request presented by the Hon. Secretary on behalf of the "Daughters and Children of the British Empire," that one hour a month in every school be set apart for the teaching of patriotism, and a special programme prepared for that purpose, the Committee recommends no action.

2. That this Association expresses its entire sympathy with the efforts to extend the educational advantages to isolated labourers in the newer districts of Canada. That the action of employers in mines, on railroad construction works, pulpwood operations and lumbering generally, in volunteering to erect suitable buildings at their camps for reading, study and entertainment be heartily commended. And in view of the fact that a considerable proportion of the employers have been found unable to read or write, this Association urges Provincial Governments and the public generally to co-operate in providing, not only travelling libraries for these reading rooms, but also elementary instruction for those who cannot at present avail themselves of such privileges.

3. That in the matter of Dominion Registration, a Committee of four members be appointed to consider the subject and to report at the next meeting in Winnipeg; the Committee to consist of Dr. Goggin, Dr. McKay, Hon. P. Brucher de la Bruère, and the Minister of Education for Ontario.

4. That this Association endorses the request of the Toronto Principals' Association in regard to having the metric system of weights and measures made compulsory in Canada.

5. That the communication from the Women's Christian Temperance Union be endorsed in so far as the inculcating of temperance principles in the schools is concerned.

6. That the following report regarding teachers' salaries sent on from the Inspection and Training Section be endorsed by this Association.

To the Chairman of the Committee on Resolutions :—

A Committee consisting of Inspector Silcox, St. Thomas ; Dr. Harper, Quebec; and Principal Scott, Toronto; was appointed from the Inspection and Training Section to consider a resolution by Inspector Silcox re Teachers' Salaries.

They reported to the Section as follows :

In view of the action taken by this Association at its last meeting, we as an Association suggest that the respective legislatures be approached in regard to granting a special bonus to those schools in which efficient teachers have been engaged for a continuous period of three years, at a salary which the respective legislatures consider ample.

That a copy of this report be sent to the various Provincial Associations for discussion and action and they to report to this Association at its next meeting in Winnipeg in 1903.

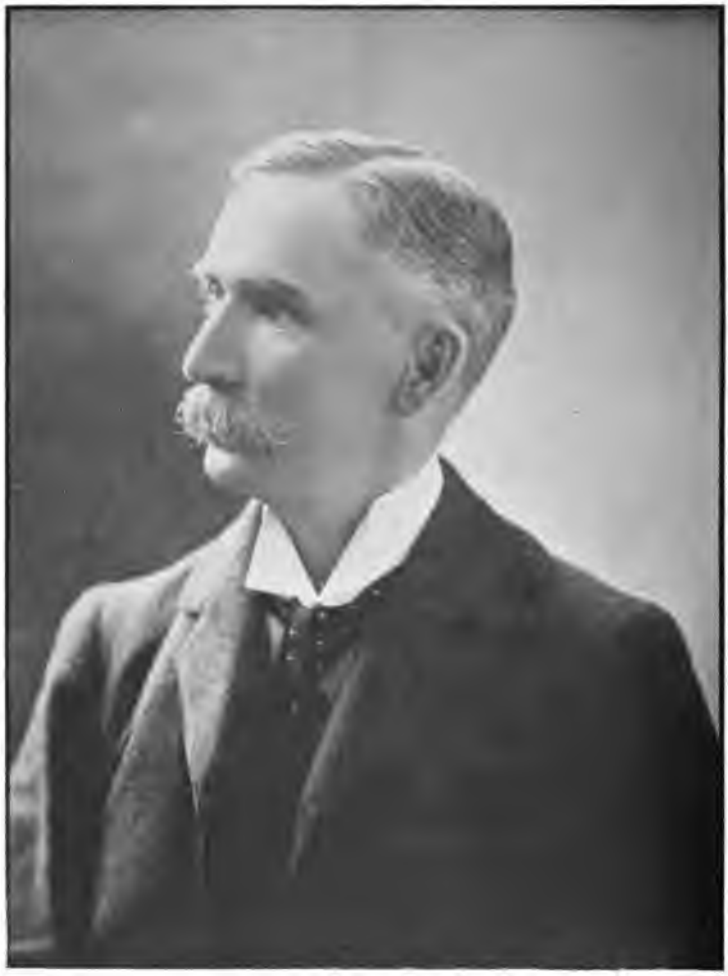
(Signed) S. SILCOX,
Convener of Committee.

On motion of Principal Ellis and Professor Magnan the report of the Committee on Resolutions was adopted.

Miss Hughes of St. Regis then addressed the meeting on the subject of Indian Schools. At the request of Dr. MacCabe, Dr. Goggin also spoke upon the same subject.

On motion of Principal Truell and Inspector Knight, a vote of thanks was presented to the retiring President, Dr. J. A. MacCabe; also to the authorities of the Normal School for granting the Association the use of the building for its meetings; and to the representatives of the Press for the manner in which they had reported the proceedings of the Convention.

On motion of Dr. Sinclair and Dr. Harper the meeting then adjourned.



D. J. GOGGIN, M.A., D.C.L.

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J. T. BOWERMAN, M. A., Ottawa.

DR. J. A. MACCABE. M.A., LL.D.

Addresses of the General Meetings.

MEETING OF WELCOME

August 14th, 8 p.m.

The Convention was called to order by Dr. J. A. MacCabe, President of the Association. After the business of the meeting was inaugurated, Dr. MacCabe introduced Mayor W. D. Morris, who officially welcomed the delegates to the Capital.

TO THE "DOMINION EDUCATIONAL ASSOCIATION," ASSEMBLED IN OTTAWA, 14TH AUGUST, 1901.

Mr. President, Ladies and Gentlemen,—It affords me very great pleasure, as Mayor of the City of Ottawa, to be present on this occasion, and, on behalf of our Council and citizens, to extend to you, the members of the "Dominion Educational Association," a cordial welcome. The name alone of your Association is sufficient to commend itself to our attention and to ensure our hearty sympathy. The work in which you are engaged and which has brought you together is one of paramount importance to the welfare and progress of our Dominion, and one whose beneficial results are shared by all classes, independent of race, rank or religion. To all true lovers of their country, who desire to see this great Dominion of ours take its place in the foremost ranks of the nations of the world, materially, morally, and intellectually, no agency can be more important than one such as yours, which is laboring for the educational advancement, morally and mentally of the youth of the country. The child is father to the man, and if trained aright through such agencies as yours, we need not fear but that the former will develop into such a manhood as will prove a safeguard to and a surety for the future prosperity of our country. Such is the aim and object of your Association, and judging from the success which has attended your labors in the past, we are assured that still greater results will be achieved by you in the future.

While with us, we trust that your sojourn will be both pleasant and profitable, and that while devoting yourselves more especially to the educational intetests of the Dominion, you may yet have an opportunity for social enjoyment and intercourse, as well as of enjoying the scenic and local attractions in which our city so largely abounds, and of which our citizens are so justly proud.

On behalf of our citizens, I extend to you all, individually, a hearty welcome, and can confidently assure you that all will strive to the utmost of their ability to make your visit an enjoyable one, so that when, your duties being ended, you shall return to your respective homes, you will bear with you pleasant memories of your brief sojourn here and be thereby induced to repeat your visit at no distant date.

On behalf of the Council and citizens of Ottawa.

W. D. MORRIS,
Mayor.

OTTAWA, 14th August, 1901.

ON BEHALF OF THE ASSOCIATION DR. MACCABE RESPONDED AS FOLLOWS :

Mr. Mayor, Ladies and Gentlemen,—As President of the Dominion Educational Association now assembled in triennial convention, I wish to thank you, Mr. Mayor, on behalf of the Association, for your cordial words of welcome. I know it is at some personal inconvenience you have remained in the city to receive, as its Chief Magistrate, the educationists assembled here this evening.

But, as you say, Mr. Mayor, the name and work of our Association—The Dominion Educational Association—are sufficient to commend us to the city in which we meet ; and I have every hope that the beneficial results which you are good enough to predict for this Convention will be fully realized.

I am quite certain also that the pleasant memories you speak of will be carried away by every member of the Association.

Ladies and Gentlemen of the Dominion Educational Association, —it is a great pleasure for me as President of the Association, to meet you in Convention after three years' recess. As the best educational thought of each province will be given by its representatives, I shall

content myself this evening with calling your attention to a few matters of general importance—matters which naturally commend themselves to the consideration of an assembly like this.

If I were asked what is the leading characteristic of human life at the present day, I would answer unhesitatingly—restlessness—a restlessness looking forward to, and trying to bring about better things. This restlessness is in the educational field as strong as in the other fields. Thoughtful educators see it, and many of the papers on our programme show me that we are alive to this spirit of unrest, and feel our obligation to deal with it. Ideals in the life of mankind are steadily rising, and it is recognized that the teacher must be a force helping this upward movement.

In the first place we find a strong tendency towards making education more practical—more helpful in fitting our boys and girls for the duties of practical life. In this connection we note the great advance made in nature study since our last convention. In our Dominion there are now few schools in which something is not done in this field of work. Its effect in moulding the intellectual, moral and esthetic powers of the child are incalculable. We shall see realized Lowell's idea :—

"Before men made us citizens, Great Nature made us men."

Another of the fields of work in which rich harvests are being reaped is that of "Manual Training." The results here are striking. I am glad to say that we shall hear from those best able to speak on this matter, interesting and instructive accounts of the progress made in this work in different parts of the Dominion.

With this is closely connected art education. The teachers of manual work recognize the value of first drawing the object in exact proportions, then making it. On this subject also we shall have suggestions from one competent to speak.

The training of our girls in domestic science in all that pertains to making our Canadian homes the most comfortable and the most happy homes, is now stirring our educational world. While the question of the higher education of women is practically out of the sphere of discussion, the question of training in the best development of the household,—the home making and home keeping faculties—holds a first place in educational thought.

In all our training for practical life--and this is the keynote of educational work of the present day—one must not forget the building up of a strong National Sentiment. In this comparatively young country, with its immense possibilities, with people of different races, religions, tastes, and aspirations, it is of the utmost importance that the idea of a united Canada be woven through every part of the school work. There, also, our teachers show their appreciation by contributing two papers to this most important topic.

Last, but not least, comes the consideration of the teacher himself. The first change necessary here is, increase of salary. That the large majority of teachers receive salaries wholly inadequate, is recognized from ocean to ocean, except by a few whose opinion I need not stop to discuss. This is, I know, a difficult matter with which to deal—difficult in the light of finding out a safe and effective remedy. We are told that salaries will be increased when public opinion is educated up to this action. I fear none of us present tonight will live to see public opinion committing itself in this way. The interference of governments or education departments, is, I grant, attended with difficulty and perhaps, dangers: but I feel that any improvement in teachers' salaries must be brought about by governmental or departmental action.

The questions: The desirability of Dominion registration for trained teachers, and the establishment of a Dominion Educational Bureau, are once more to be presented, and will, I am sure once more receive the warm support of the Association. The action of the medical profession in this matter of Dominion Registration gives us a helpful lesson.

I have no doubt the programme which has been placed in your hands commends itself to you by the number and importance of the subject to be discussed. All the sections are to be congratulated on their well selected topics—topics closely related to the success of the work in Kindergarten, Elementary and High Schools and in the fields of Inspection and Training.

That all our deliberations may result in the upbuilding of our noble profession among the generation committed to our educational care is a prayer, in which, I feel all will cordially join.

HON. P. BOUCHER DE LA BRUERE, D. C. L.
(Superintendent of Public Instruction, Quebec.)

Mr. President, Ladies and Gentlemen,—Being called upon by circumstances and the position I occupy to represent the Province of Quebec at this convention of educationists, it is both a duty and a pleasure for me to tender to His Worship the Mayor of Ottawa and to our distinguished President, Dr. MacCabe, my sincere thanks for the hearty welcome they have extended us at the Capital.

To me it is a great honour to be permitted to represent the teaching body of my province and it is likewise a great satisfaction to find myself in the midst of friends from other provinces who are as devoted to the great cause of education as we are on the opposite bank of the Ottawa.

This brilliant meeting is also a manifest proof of the deep interest felt by the Federal Capital in educational matters. The delegates from the provinces are particularly flattered by this evidence of sympathy and approval. For my part, I am glad to see such a distinguished company and I am happy to think that among the ladies whose presence adorns this assembly, there are many mothers whose solicitude for the education of their children cannot be too great and that, yielding to the inspiration of their hearts, they have desired by their gracious presence this evening to contribute their valuable assistance towards making this convention a success.

This fact cannot cause surprise for in the home circle the first educator of all is the mother who presides over the intellectual development of her child.

I may say, Ladies and Gentlemen, that in our country, whatever may be our race or creed, we are all animated with the desire of bringing about the establishment of a select system of education, based upon sound principles, healthy, invigorating and elevated in its tone, and that such a system should be diffused amongst the various classes of the population.

I say a select system of education, because a people cannot distinguish itself solely by its knowledge of grammar, arithmetic or gymnastics which are within the sphere of education properly so called; it is further necessary that the child should continue to receive at school that sound home education which consists in moulding the character and fostering the affections.

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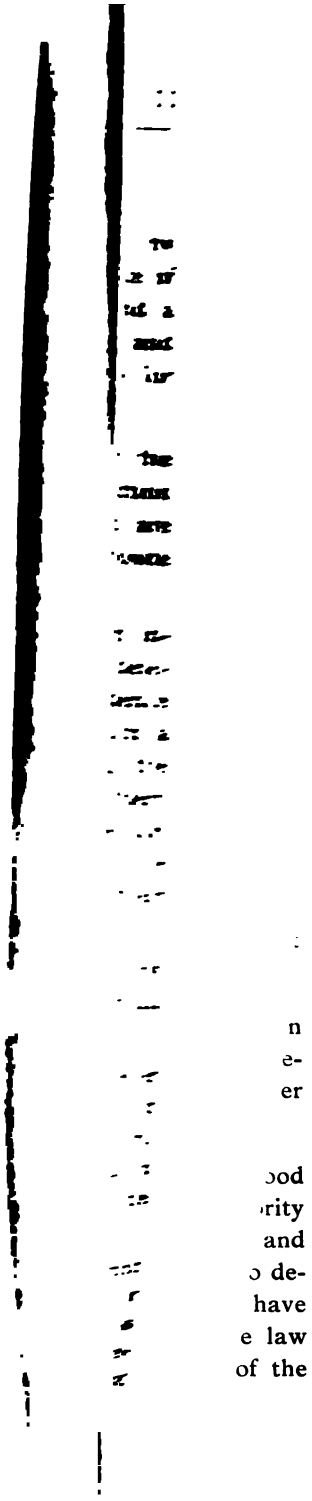

...n the minds of our people the words "public school" mean, for the protestant of the province of Quebec, a school in which equal justice is done to religious convictions and respect for the language traditions and customs of those who live in our midst. Thus the Protestant minority can manage its schools as it wishes and the majority will in no way hamper its action. Such a system in conformity with its faith, its temperament, its ideals and its special character of the French race. This is a form that is susceptible of improvement like that of the other provinces but can only be done by those who do me the honour of listening to my remarks that we in the Province of Quebec have to deal with and the same moral, with the object of making a uniform whole those various school organizations each of which meets the special wants of the populations of the provinces. Neither would we deem it desirable as has been suggested, to solicit the federal government to intervene in matters of public instruction by establishing a department of education not provided for by the constitution of the country. We wish to remain as we are, free to adopt whatever measures we may deem most suitable for the improvement of our educational system.

The security of the various interests lies in respect for the federal compact and, I believe, in our trying in our schools to develop a national spirit amongst our children that will lead us above all to love Canada, its laws and its institutions.

For us French Canadians who have been separated from our former mother country for a century and a half and who were born in America, our country, our home is Canada. What we cherish is our hearths, our native air, our language, our liberties, our traditions of loyalty to the sovereign power that protects us.

Those amongst our fellow-citizens of English, Scotch or Irish origin who were born on the other side of the Atlantic, yield to a very natural and very elevated sentiment in considering England, Scotland or Ireland as *home*. For their children who first see the light in the valley of the St. Lawrence or on the western plains, Canada will be the particular land of their affection; their preferences, their tastes and their ambition should be for their native soil.

...we should inculcate in our children a Canadian spirit, a p... ...ded on our social needs and on the love of our con...

As I must not forget that others have to speak after me, I am happy to conclude by expressing the wish that this convention will be fruitful in good results for the development of public instruction in the Dominion of Canada.

PRINCIPAL G. R. MARSHALL, HALIFAX.

Mr. President, Ladies and Gentlemen,—On behalf of the teachers of the Province of Nova Scotia, I must thank the Citizens of Ottawa for their cordial welcome so happily expressed by His Worship the Mayor. The City of Ottawa being the Capital of the Dominion was a matter of pride to all our people, and was, therefore, a most suitable place for holding such triennial meetings of this Association.

In Nova Scotia we were trying to give each child the blessing of at least a common school education, and in doing so, to employ only the most improved methods of instruction. Our most marked progress had been made in the teaching of the natural sciences, which was due, very largely, to the enthusiasm of our Superintendent, Dr. McKay.

We had been charged with a lack of patriotism, but the recent war in South Africa had proven that accusation to be groundless. The Provinces of the Dominion, however, were widely separated, and their interests sometimes conflicted. We rejoice that nothing has been allowed to disturb the good feeling that exists, and we trust that these meetings will bind them still closer together.

H. V. B. BRIDGES, M.A., INSPECTOR OF SCHOOLS, FREDERICTON, N.B.

Mr. President, Ladies and Gentlemen,—I do not know why, some two or three hours ago, I was asked to say something on behalf of my native Province this evening, and I cannot discover any other reason than that the President considered me a fair representation of the physical development of the Province of New Brunswick.

I am sure, to those that know him personally, it is indeed, a matter of regret that Dr. Inch, our Superintendent of Education, is not present to reply in his graceful and forceful manner on behalf of the Province of whose educational department he is the chief executive officer. He is at present in England for a short rest from the duties of office, and while I have been trying to gather together a few scattered ideas, and also to listen to the admirable addresses of those who have preceded me, I have been thinking that I, too, would rather like, for this present, to be across the water.

However, after listening to the representatives of the great North-West, and of the large Provinces of Ontario and Quebec, I think you will be content that the remarks of those replying for the smaller provinces should be brief.

In New Brunswick, of late, on account of the increased Government grants in that direction, we have had undoubtedly increased efficiency in the teaching in our High Schools, and as a consequence the number of pupils in attendance at our High Schools has greatly increased. I do not think that there is any exaggeration in my stating here that our High School attendance has increased one hundred per cent. during the last ten years. And yet to-night if I were asked what I considered the strongest feature of our Educational System, as at present carried out, I would say that it is undoubtedly in the elementary grades, in those schools attended by the large mass of the children enrolled. For here it has been the aim of teachers, trustees and supervising officers from the establishment of the free school system in the schools where the children of the farmer, the mechanic, the laborer and the fishermen receive their education, scanty though in some cases it may be, that it shall have life and power for the purpose for which it is intended.

Much has been done of late in the way of introducing nature studies in our schools, and we have, for the purpose, an admirable course in natural history in our Provincial Normal School.

The school of Manual Training lately established by the generosity of Sir W. C. McDonald has been attended and is now being attended by very many teachers in the city of St. John, thus showing on the part of the teachers themselves, a willingness to be ready for the inception of such work in connection with our public schools.

Perhaps our educational development has been slow, but we certainly have avoided anything like pretence in show, and those among us who have influence and weight are those who have won their reputation by diligence and success in the work of teaching.

Since I have come here, Mr. President, it has been impressed upon me that this city of Ottawa is a place admirably adapted for such a gathering as this. It has been well said that those statesmen who met in convention thirty-four years ago to draw up a constitution for the federation stood upon the threshold of a nation's existence, and we have met here to do what was in our power towards developing the intellectual life of this country. The representatives of the different provinces (convened) during these years, in yonder Parliament hall, while reflecting the political sentiments of their own part of the Dominion, have met on intellectual equality, and the statesmen from the smaller provinces have been found in no way inferior to their brothers from the larger provinces, and they have an equal share in the burden of developing their country's resources.

We have met here also as representing the different provinces in their educational life, not that those coming from the larger provinces of Ontario and Quebec should overshadow or tower above their brothers from the smaller provinces. Not one of them I am sure would wish that. But that all meeting here on an equality, might gather increased experience and enthusiasm in the cause to which the large majority of us have devoted our lives—the young to learn from the experience of the old, and the old to partake of the enthusiasm of the young. For we must all well know that the hope and the future of this great Dominion lies, to a great extent, in the training intellectual, moral and physical, that the children are receiving in our schools, and the future uses which they make of that training, in their own and their country's interests. What has this Dominion Educational Association done already? some one may ask. By the passing of a single resolution in Halifax, three years ago, and the subsequent action of the Board of Education and Council of Public Instruction, an opportunity has been afforded the children from the Atlantic to the Pacific to give substantial evidence of that patriotic feeling which we know is so strong among them, and for the teacher to direct that sentiment along proper lines.

And what better place can there be for the cultivation of true loyal sentiments that the school room! For here can be fostered a

love of country not only because of the heroic deeds of their ancestors but also on account of what the country is doing for them in preparing them for the highest and best purposes of life, and thus cultivating the noblest qualities of mind and heart.

I have very much pleasure, Mr. Mayor, on behalf of those from the Province of New Brunswick, in thanking you for your kind welcome to this beautiful city, and of expressing to you, Mr. President, the very best wishes of the teachers of my native province for the present and future welfare of the Dominion Educational Association.

WM. SCOTT, B.A., PRINCIPAL TORONTO NORMAL SCHOOL.

Mr. President, Ladies and Gentlemen,—"Some men are born great, some achieve greatness, and some have greatness thrust upon them." I belong to the last class this evening—being called upon, owing to the unavoidable absence of the Hon. the Minister of Education for Ontario, to respond to the cordial words of welcome for the great Province of Ontario. And Mr. Mayor, on behalf of the educationists from Ontario, I wish to thank you and through you the Council and Citizens of Ottawa for their gracious and wholesouled welcome to your fair city.

The remarks of the previous speaker call to my mind two or three topics on which, Sir, I desire to offer a remark. The first of these is Manual Training. I am pleased at what was said concerning this subject to-night. If there is one subject more than another that is misunderstood by both its friends and its opponents it is that of Manual Training. Its so-called friends are constantly confusing it with technical education and thus are forever furnishing its opponents with good substantial arguments against its introduction into our schools. These say it is no business of the State to provide for the special training of a race of carpenters and tinsmiths. Those who understand the subject know that it is not designed to make tradesmen but to supply means of training the hands and eyes of many who otherwise would be without such necessary training and that just as soon as the work these are set upon begins to be automatic training ceases and the business of making tradesmen begins.

At the Toronto Normal School, accommodations are such that as yet we have been unable to do justice to this subject, but I know that the matter of providing suitable accommodation is now engaging the attention of our educational authorities, and I believe that a satisfactory solution of this problem will soon be reached.

Another subject on which I would like to offer a remark is that of the much spoken of but little understood one of Nature Studies. Judged by books which are being placed on the market in almost endless numbers, this subject is as little understood as that of Manual Training. The true purpose is not to collect masses of facts but to cause pupils to become careful observers of the world about them and at the same time to teach them to make a systematic and accurate record of these observations. Much missionary work must yet be done amongst our teachers before this view of the subject will prevail. Many teachers, inspectors, and Nature-Book writers are all imbued with the idea that the main thing is to store the mind with facts. So far as development is concerned this may be as useless as committing a dictionary to memory.

The salary question is another one pressing for solution. One of the speakers referred to the importance of educating public opinion so that salaries may be increased. My experience goes to show me that the most illiberal in the community are those who were at one time teachers and who have taken to some other calling now. Although at one time these clamored for more salary they are often the first to suggest a cut under the changed circumstances. The Government might fix a minimum salary, but experience would be required to show whether this would not be a boomerang-way of helping the teacher by tending to reduce all salaries to this minimum. The salary question can, it seems to me, be only solved by making better men and women to fill the teacher's position. Then the same principle of supply and demand which decides prices and remuneration everywhere will have a chance to level up the salaries of teachers.

If in the school systems of the Confederated Provinces there exist certain dissimilarities due to local influences, to the particular feelings of a race or to the views of some educators, it is necessary, notwithstanding such differences, that the education of all should be founded on those principles which constitute the basis of every well organized society, namely: religion and love of country.

In fact religious principles should be the corner-stone of popular education; from this primal source the child will derive that gradual and harmonious development wnich will make of him a true citizen. This is not a new idea; it is as old as the human race and, in our country as elsewhere, it is graven on the minds of the people as well as on the pages of the statute book. It has always headed the programme of Catholic schools and in Montreal, a few years ago, the members of the provincial synod of the Anglican church were unanimous in asserting the efficacy of religious teaching as a preventative of crime and laxity of morals.

In Toronto, in 1897, Bishop Sullivan, an Anglican bishop, stated before the school-board that no education can be considered complete unless the growth of the moral and spiritual faculties be stimulated to the same extent as the growth of the physical and intellectual. Considering that the fundamental questions of life lie within the domain of morality and spirituality, he added that such questions are not mystical but practical and of daily occurrence.

A distinguished English statesman expressed the same principle in other words when he said that "in the order of eternal thoughts we must seek for the principles that should govern us in our moral lives." These words were pronounced fifty years ago by a governor whose memory is beloved in Canada, Lord Elgin.

Statements such as these made by men of high rank in religious and civil society clearly point out, I think, to the provinces the path that should be followed in the direction of education, if we do not wish the people to wander from the straight road towards the abyss of Godless schools and of social revolution.

A single duty devolves upon educators in Canada as in all other countries. Side by side with religion as the basis of the school system should be taught the love of country. The grand word PATRIOTISM should be found at the head of all our school programmes. This sentiment must be cultivated and developed in the minds and

hearts of our children. The word is all the more appropriate in Canada since our political system consists of a Confederation of provinces containing the representatives of two great races proud of their origin, jealous of their honour and deeply attached to their language and their traditions.

These races, destined to live side by side on the soil of America, will multiply and prosper without however becoming fused together I presume, for the French Canadian element could not conceive the idea of absorbing the English Canadians any more than the latter can believe that they will cause the descendants of the first inhabitants of the country to disappear from Canada.

It both are convinced of this idea, the folds of the British flag are ample enough to shelter the scions of both races ; the British constitution is beneficient enough to impose upon majorities respect for the rights of minorities and the liberty we enjoy is great enough to animate all with patriotism which, for Canadians, means attachment to the soil, a desire to see the resources of the country developed and all the elements of the population vieing with one another in zeal for the increase of their social and political influence.

Ladies and Gentlemen, we should engrave this sentiment on the children's hearts during the progress of their education by teaching them to respect the various races inhabiting the country and by making them understand the importance of races being united, that peace and harmony may prevail in the Confederation.

I can bear testimony to my province that in the public education given to its children we endeavour to discountenance all race prejudices and to teach them to desire for our fellow-citizens of other origins the same degree of liberty that we claim for ourselves.

Our Education Act is moreover a striking proof of the good faith and good feelings that animate us. With us the minority enjoys all the privileges secured to it by the constitution of 1867 and the majority has never had any idea of abusing its strength to deprive the minority of such privileges. Heads of families can have their children taught according to their religious belief and the law provides them with the means; for this the mere expression of the parental will suffices.

In the minds of our people the words "public schools" mean, not the constraint of the minority for the benefit of the majority, but equal justice to all religious denominations and respect for the language, traditions and feelings of those who live in our midst. Thus the Protestant minority can manage its schools as it wishes and the majority, on its side, has its school system in conformity with its faith, its temperament, its needs and its special character of the French race. This system may be susceptible of improvement like that of the other provinces, but I can say to those who do me the honour of listening to my remarks that we in the Province of Quebec have no idea of casting into the same mould, with the object of making a uniform whole, those various school organizalions each of which meets the special wants of the populations of the provinces. Neither would we deem it desirable, as has been suggested, to solicit the federal government to intervene in matters of public instruction by establishing a department of education not provided for by the constitution of the country. We wish to remain as we are, free to adopt whatever measures we may deem most suitable for the improvement of our educational system.

The security of the various interests lies in respect for the federal compact and, I believe, in striving in our schools to develop a national spirit amongst our children that will lead us above all to love Canada, its laws and its institutions.

For us French Canadians who have been separated from our former mother country for a century and a half and who were born in America, our country, our home is Canada. What we cherish is our hearths, our native air, our language, our liberties, our traditions of loyalty to the sovereign power that protects us.

Those amongst our fellow-citizens of English, Scotch or Irish origin who were born on the other side of the Atlantic, yield to a very natural and very elevated sentiment in considering England, Scotland or Ireland as *home*. For their children who first see the light in the valley of the St. Lawrence or on the western plains, Canada will be the particular land of their affection; their preferences, their tastes and their ambition should be for their native soil.

Therefore we should inculcate in our children a Canadian spirit, a patriotism founded on our social needs and on the love of our country.

As I must not forget that others have to speak after me, I am happy to conclude by expressing the wish that this convention will be fruitful in good results for the development of public instruction in the Dominion of Canada.

PRINCIPAL G. R. MARSHALL, HALIFAX.

Mr. President, Ladies and Gentlemen,—On behalf of the teachers of the Province of Nova Scotia, I must thank the Citizens of Ottawa for their cordial welcome so happily expressed by His Worship the Mayor. The City of Ottawa being the Capital of the Dominion was a matter of pride to all our people, and was, therefore, a most suitable place for holding such triennial meetings of this Association.

In Nova Scotia we were trying to give each child the blessing of at least a common school education, and in doing so, to employ only the most improved methods of instruction. Our most marked progress had been made in the teaching of the natural sciences, which was due, very largely, to the enthusiasm of our Superintendent, Dr. McKay.

We had been charged with a lack of patriotism, but the recent war in South Africa had proven that accusation to be groundless. The Provinces of the Dominion, however, were widely separated, and their interests sometimes conflicted. We rejoice that nothing has been allowed to disturb the good feeling that exists, and we trust that these meetings will bind them still closer together.

H. V. B. BRIDGES, M.A., INSPECTOR OF SCHOOLS, FREDERICTON, N.B.

Mr. President, Ladies and Gentlemen,—I do not know why, some two or three hours ago, I was asked to say something on behalf of my native Province this evening, and I cannot discover any other reason than that the President considered me a fair representation of the physical development of the Province of New Brunswick.

I am sure, to those that know him personally, it is indeed, a matter of regret that Dr. Inch, our Superintendent of Education, is not present to reply in his graceful and forceful manner on behalf of the Province of whose educational department he is the chief executive officer. He is at present in England for a short rest from the duties of office, and while I have been trying to gather together a few scattered ideas, and also to listen to the admirable addresses of those who have preceded me, I have been thinking that I, too, would rather like, for this present, to be across the water.

However, after listening to the representatives of the great North-West, and of the large Provinces of Ontario and Quebec, I think you will be content that the remarks of those replying for the smaller provinces should be brief.

In New Brunswick, of late, on account of the increased Government grants in that direction, we have had undoubtedly increased efficiency in the teaching in our High Schools, and as a consequence the number of pupils in attendance at our High Schools has greatly increased. I do not think that there is any exaggeration in my stating here that our High School attendance has increased one hundred per cent. during the last ten years. And yet to-night if I were asked what I considered the strongest feature of our Educational System, as at present carried out, I would say that it is undoubtedly in the elementary grades, in those schools attended by the large mass of the children enrolled. For here it has been the aim of teachers, trustees and supervising officers from the establishment of the free school system in the schools where the children of the farmer, the mechanic, the laborer and the fishermen receive their education, scanty though in some cases it may be, that it shall have life and power for the purpose for which it is intended.

Much has been done of late in the way of introducing nature studies in our schools, and we have, for the purpose, an admirable course in natural history in our Provincial Normal School.

The school of Manual Training lately established by the generosity of Sir W. C. McDonald has been attended and is now being attended by very many teachers in the city of St. John, thus showing on the part of the teachers themselves, a willingness to be ready for the inception of such work in connection with our public schools.

Perhaps our educational development has been slow, but we certainly have avoided anything like pretence in show, and those among us who have influence and weight are those who have won their reputation by diligence and success in the work of teaching.

Since I have come here, Mr. President, it has been impressed upon me that this city of Ottawa is a place admirably adapted for such a gathering as this. It has been well said that those statesmen who met in convention thirty-four years ago to draw up a constitution for the federation stood upon the threshold of a nation's existence, and we have met here to do what was in our power towards developing the intellectual life of this country. The representatives of the different provinces (convened) during these years, in yonder Parliament hall, while reflecting the political sentiments of their own part of the Dominion, have met on intellectual equality, and the statesmen from the smaller provinces have been found in no way inferior to their brothers from the larger provinces, and they have an equal share in the burden of developing their country's resources.

We have met here also as representing the different provinces in their educational life, not that those coming from the larger provinces of Ontario and Quebec should overshadow or tower above their brothers from the smaller provinces. Not one of them I am sure would wish that. But that all meeting here on an equality, might gather increased experience and enthusiasm in the cause to which the large majority of us have devoted our lives—the young to learn from the experience of the old, and the old to partake of the enthusiasm of the young. For we must all well know that the hope and the future of this great Dominion lies, to a great extent, in the training intellectual, moral and physical, that the children are receiving in our schools, and the future uses which they make of that training, in their own and their country's interests. What has this Dominion Educational Association done already? some one may ask. By the passing of a single resolution in Halifax, three years ago, and the subsequent action of the Board of Education and Council of Public Instruction, an opportunity has been afforded the children from the Atlantic to the Pacific to give substantial evidence of that patriotic feeling which we know is so strong among them, and for the teacher to direct that sentiment along proper lines.

And what better place can there be for the cultivation of true loyal sentiments that the school room! For here can be fostered a

love of country not only because of the heroic deeds of their ancestors but also on account of what the country is doing for them in preparing them for the highest and best purposes of life, and thus cultivating the noblest qualities of mind and heart.

I have very much pleasure, Mr. Mayor, on behalf of those from the Province of New Brunswick, in thanking you for your kind welcome to this beautiful city, and of expressing to you, Mr. President, the very best wishes of the teachers of my native province for the present and future welfare of the Dominion Educational Association.

WM. SCOTT, B.A., PRINCIPAL TORONTO NORMAL SCHOOL.

Mr. President, Ladies and Gentlemen,—"Some men are born great, some achieve greatness, and some have greatness thrust upon them." I belong to the last class this evening—being called upon, owing to the unavoidable absence of the Hon. the Minister of Education for Ontario, to respond to the cordial words of welcome for the great Province of Ontario. And Mr. Mayor, on behalt of the educationists from Ontario, I wish to thank you and through you the Council and Citizens of Ottawa for their gracious and wholesouled welcome to your fair city.

The remarks of the previous speaker call to my mind two or three topics on which, Sir, I desire to offer a remark. The first of these is Manual Training. I am pleased at what was said concerning this subject to-night. If there is one subject more than another that is misunderstood by both its friends and its opponents it is that of Manual Training. Its so-called friends are constantly confusing it with technical education and thus are forever furnishing its opponents with good substantial arguments against its introduction into our schools. These say it is no business of the State to provide for the special training of a race of carpenters and tinsmiths. Those who understand the subject know that it is not designed to make tradesmen but to supply means of training the hands and eyes of many who otherwise would be without such necessary training and that just as soon as the work these are set upon begins to be automatic training ceases and the business of making tradesmen begins.

At the Toronto Normal School, accommodations are such that as yet we have been unable to do justice to this subject, but I know that the matter of providing suitable accommodation is now engaging the attention of our educational authorities, and I believe that a satisfactory solution of this problem will soon be reached.

Another subject on which I would like to offer a remark is that of the much spoken of but little understood one of Nature Studies. Judged by books which are being placed on the market in almost endless numbers, this subject is as little understood as that of Manual Training. The true purpose is not to collect masses of facts but to cause pupils to become careful observers of the world about them and at the same time to teach them to make a systematic and accurate record of these observations. Much missionary work must yet be done amongst our teachers before this view of the subject will prevail. Many teachers, inspectors, and Nature-Book writers are all imbued with the idea that the main thing is to store the mind with facts. So far as development is concerned this may be as useless as committing a dictionary to memory.

The salary question is another one pressing for solution. One of the speakers referred to the importance of educating public opinion so that salaries may be increased. My experience goes to show me that the most illiberal in the community are those who were at one time teachers and who have taken to some other calling now. Although at one time these clamored for more salary they are often the first to suggest a cut under the changed circumstances. The Government might fix a minimum salary, but experience would be required to show whether this would not be a boomerang-way of helping the teacher by tending to reduce all salaries to this minimum. The salary question can, it seems to me, be only solved by making better men and women to fill the teacher's position. Then the same principle of supply and demand which decides prices and remuneration everywhere will have a chance to level up the salaries of teachers.

Reply of D. J. Goggin, M.A., D.C.L.

(Superintendent of Education, Regina, N.W.T.)

On behalf of the Great West, I thank you heartily, Ladies and Gentlemen, for this cordial reception, and you, Mr. Mayor, for the felicitous terms in which you have bade us welcome.

In its general form our system of Education in the Territories has much in common with that of Ontario. You would expect that, since so many of those who have been responsible for our system were educated here. We have benefited by your experiences and so have been able to avoid some of your mistakes. In a new country, unfettered by traditions and vested rights, it has been possible for us to advance more rapidly than the older provinces.

We offer to the pioneer a modern school, in its work abreast of the best educational thought and practice of to-day. We give a legislative grant for its support so large that the ratepayer scarcely feels his individual tax. In a rural school with a daily average attendance of fifteen pupils and employing a second class teacher, we pay an annual grant of over $350. When you compare this with what a school of the same type would obtain in Ontario you will realize how important a factor in our national life we consider education to be, and how determined we are that the pioneer who comes to help us to develop that great country shall find a generous provision made for the education of his children, especially at the time when he is least able to make that provision for them himself.

We supply this school with a teacher equal in education and professional training to your teachers. The pioneer who in the cutting of his harvest has no use for a second-hand reaper, finds it legally impossible to engage an untrained teacher to educate his children. Eight years ago the Premier of the Territories, the Hon. Mr. Haultain, said that the employment of untrained teachers must cease, and it ceased accordingly and at once.

In this school we make provision for the teaching of all that you and I were taught and for some other subjects that were not then on the curriculum. Ours is an agricultural country and we believe that the school, as one of its duties, should shape its courses so as to prepare pupils for the civilization into which they are born, and within reasonable limits for the vocation which the great mass of them

must follow. So we have had for six years Natural Study and Agriculture as compulsory subjects in all classes of schools—not optional as you have had at least one of these subjects. If it ever needed proof, we have proved that the principle of agriculture can be taught in schools. The practical illustrations of the observance or lack of observance of these principles are seen in the farms about the school houses, and occasionally in school gardens. We have not had to meet the problem of how to keep the boy on the farm. He remains there because he makes more at farming than at anything else.

Our course in Nature Study is comprehensive and practical. It has been highly commended by English and Canadian Educational authorities and journalists. Through observation and inference the child is led to see the use and beauty and meaning of plant and animal life, to see laws of his own being revealed through the study of the laws governing plant and animal life, and so he is led to look through law to the Law-giver. Of the ethical value of this study one might say much.

Like you, we are beginning Manual Training, thanks to the generosity of that public-spirited citizen, Sir William MacDonald. Those of us, who have watched closely the experiments made in this direction during the past fifteen or twenty years, have noted the varying values placed on this phase of Educational effort by its leading advocates, and have kept our faith in its usefulness, have often had reason to wish that it might be saved from the rash utterances of its zealous but not always judicious friends. It may pave the way for the technical school and college ; it may teach the town and city boy the use of those tools which the boy on the farm has to be familiar with ; it will give definiteness to some phase of our present school work ; it will enforce some valuable ethical truths ; but it is not the Educational cure—all that some would have us to believe, and its successful introduction into rural schools with a single room and teacher is still an unsolved problem.

I am conservative enough to believe that after all we cannot do better for most of our young people than to teach them to read thoughtfully and give them a taste for good literature ; to teach them to spell ; to teach them to write a plain hand and compose a business or social letter ; to teach them to put in orderly simple English any thoughts they may wish to utter with tongue or pen ; to teach them

sufficient arithmetic to solve the problems of ordinary business; to teach them something of the geography and history of their own country. I am radical enough to believe that we must open to them, through the training of their sense faculties, the world of nature that lies about them; and we must train their motor faculties to be prompt and skilful agents of their minds — so I am an advocate for Nature Study and Manual Training and we have ample time for these if we will but confine ourselves to the essentials in the traditional studies.

New occasions teach new duties
Time makes ancient good uncouth
They must ever up and onward
Who will keep abreast of Truth.

I am assuming that all through the course, in an unobstructive, persistent and effective way we are practising the pupils in the discharge of their duties to others and themselves.

We do well to provide opportunities in the higher classes of the public school, in the high schools and colleges for those whose wealth, time, ability or inclination prompts them to make the most of their mental endowment. The state as well as the individual is the richer for such efforts.

Mr. President: representative educators from the different Provinces are met here at the Dominion Capital inspired by a common zeal and a common aim. Each within his own sphere is doing what he can to mould the children of different races and creeds into that homogeneous product the Canadian youth, who, as a citizen, is to be responsible for the building up of a great nation here in Canada. Our ideals may differ in some respects but all of us must realize that the possibilities of this Canada of ours are only beginning to be conceived even by ourselves.

Do you realize that we have only two and half millions of acres under cultivation in Manitoba and the Territories and yet we call on you for 20,000 men to help us to save our millions of bushels of the world's finest wheat? And this two and a half millions of acres is less than one-fifth of the Government school lands in the Territories and these school lands but one-eighteenth of our domain, to say nothing of Manitoba! When, in addition to all that has been accomplished in the Maritime Provinces, Quebec and Ontario, I think of the enormous wealth of British Columbia, in the products of the sea, the forest and the mines, the actual and potential wealth of the great

prairies in grain and cattle, the timber and mineral wealth of that New Ontario on which your eloquent Premier delights to dwell, on the vast stretches in Northern Quebec yet to be opened up. I know that I am a citizen of no mean country and I am proud to be a Canadian.

But with the feeling of pride comes the sense of responsibility. Immigrants differing in races, creed, customs, traditions, political instincts are pouring in and must become homogeneous if we are to realize our possibilities. While the unifying influence of the school is at work with their children, there is much to be done by our statesmen and the press. This is a time when there is need for that imperial spirit which thinks less of my Province and your Province and more of our Dominion, which declines to set race or creed in opposition for selfish ends.

Our work is to harmonize not antagonize; to strive together for the development of right national ideals, right social ideals, and I trust that this meeting will help the development of right educational ideals so that we may see grow up as product of our institutions broad, progressive men—a nation's best product; true, strong men—a nation's best safe-guard.

MANUAL TRAINING.

By P. L. GRAY, ESQ., London, Eng.

Mr. President, Ladies and Gentlemen,—It is with great pleasure that I take this opportunity of meeting such a large and representative gathering of fellow-workers in the great cause of education. Although I have known for some time the possibility of my having this pleasure, I did not know definitely until this morning that I should be asked to address the meeting. Hence my remarks must not be looked upon as anything but a few informal words; probably they will be disconnected, more probably they will be uninteresting, but certainly they will be brief. The former speaker said that he almost wished he was, as a colleague was, "on the other side of the

Atlantic," from which I have just come. I do not wish to be there again just yet—I hope you will not have occasion to express the wish for me.

For the subject of my remarks, I will turn to one with which I am specially concerned in England—that of Manual Training. So much has been written, and so much has been said in recent years on both sides of the ocean, on this subject ("in the last few minutes, in this room" one might almost add) that it is difficult to say anything very new or striking. Anyone wanting to address such an audience as this, is likely to be in the position of a preacher, preaching to the converted, and so wearing his listeners with familiar platitudes. Nevertheless, the adventure must be made occasionally—partly in the hope of presenting the subject in a new light, of supplying a few additional argumentative shots for use against a hostile world outside, and so assisting to form public opinion, which for several reasons is likely to be antagonistic to a movement, in which the most active inquirers see great promise.

It is necessary to insist, most emphatically and on every possible occasion, that Manual Training has for its fundamental idea the *general educational good* of the child; that it is not technical, and that "carpentry" does *not* describe it or its aims. Only this week in a Canadian daily paper, I saw it referred to under the name of "carpentry," with a suggestion that it should be taught, if taught at all "on Saturdays or in the evening." To adopt such a suggestion as this would be very inimical to its progress, as it is essential that it should be regarded as an integral part of the child's ordinary school-work.

The "carpentry," notion has always been something of a difficulty, and has been the source of trades-unions' objections to it. In Liverpool, for example, which was one of the earliest towns in England to adopt Manual Training in its primary schools, the local artistans (joiners and others) strongly protested against it, but some public meetings and opportunities for seeing the real scope and objects of the work, led to the gradual dying out of their unfounded objections.

Now although you ladies and gentlemen are not necesssarily experts in our work—perhaps *because* of this reason—it is most important, for its successful development, that you, and all public school teachers, should take an intelligent and friendly interest in it. Although it is necessary, at present, to employ special instructors,

yet I venture to say that the success of the movement, so admirably begun in Canada, depends very largely on the attitude towards it of teachers generally. This is almost *a priori* evident, and I know by experience in England that the statement is true. If the teacher—the ordinary teacher—is indifferent, he "creates an atmosphere" about the subject which is bound to affect the scholar, at his imitative and impressionable age, who will accordingly take but a languid interest in his Manual Training course. If the teacher is actually hostile, he may easily counteract, by chance remarks and allusions on nine half-days in the week, the work of the special teacher on his one half-day.

It must be assumed that teachers feel some enthusiasm for the cause of primary education, upon the soundness of which depends the value of all future secondary or technical training. This being so, the teacher must, as in duty bound, examine with a critical, but unprejudiced eye, any new ideas, or revival of old ones, for which is claimed some educational value.

Now, the teacher is naturally a conservative person—at least, he is in England—and generally "shy" of new departures. His arduous, exacting, often wearisome, work renders him prone (may I say it with all sympathy and without offence?) to like old methods, and to distrust new.

It is therefore natural for him to be cautious, and to ask "is this new idea good?" (I say "new," because although in essence it may be found in Comenius, Locke, Rousseau, Richter, Froebel, Pestalozzi, &c., its recent developments are on new and special lines.)

Locke long ago pointed out the curious uncertainty of an *a priori* notion in educational work; yet if one can show good reasonable grounds for some new methods, it is at any rate reasonable to give them a practical experimental trial. For Manual Training we may claim:—

(*a*) A rational theoretical basis, founded on known facts in the psychology and physiology of children—in other words one might almost say on organized common-sense.

(*b*) Some experimental justification by experience in countries where the subject has now had some years for trial.

The child has naturally a super-abundance of energy, which is, in a normal way, used-up by his activity in play, in his shouting, running, jumping—his "fidgets" when he is required to sit still by unthinking elders, during a long sermon for example. Nearly

everyone now recognizes the cruelty of forcing a child to be bodily at rest, exercising his brain only, for long periods of time. Kindergarten methods and play-intervals have in recent years, fortunately, shown our recognition of this fundamental physiological truth. But Kindergarten methods have been applied too exclusively to the very young—the plea for Manual Training is largely a plea for their continuance throughout the child's school-life.

Now, in looking round for suitable means of satisfying the given requirements, evidently we must first consider the provision of suitable material and apparatus. We wish to exercise and develop the natural constructive faculties of the child in the best possible way. When he has obtained, by growth, a certain modicum of strength and intelligence, what does he commonly love to do? Does he not pick up a piece of one of the commonest materials around him—wood—obtain some sharp-edged tool (generally a knife—or his father's razor), and "whittle"—at first from sheer liking for chips, and later attempt to fashion some familiar article, or desired instrument of amusement?

What can be more "sweetly reasonable" than to seize upon this universal feature of child-life, and to make it the basis of an organized scheme, whereby his constructive faculties are gradually trained, his mind is exercised and developed in forming clear concepts, and his bodily powers are so directed and strengthened as to make him able, with ever increasing delicacy and accuracy, to reproduce in solid material, the pictures which he has formed in his mind?

Believers in the value of Manual Training maintain, with approximate unanimity, that all these desirable ends may best be met, in a practical and efficient manner, by the use of wood and wood-working tools. The choice of these has, of course, opened the door to the "carpentry" or "trade union's" objection, to which reference has been made already, but this difficulty is not serious enough to form a real bar to progress. Even with the risk of wearying my audience, I must repeat, most emphatically, that the primary object of the work is purely educational; to train hand, eye, and brain to work together; to foster and develop habits of exactness, order, neatness, accuracy—it is not too much to say also of truth. It is no wild talk of theoretical pedagogues to say that the moral value of Manual Training is considerable, it includes the formation of an ideal, and then the attempt to realise it, the power of realisation gradually in-

creasing as the pupil progresses in the course, and forming an ever-growing pleasure to him.

But in a short address one cannot pay anything like an adequate amount of attention to this, the most important radical aspect of our subject. Neither can I refer, except in passing, to the effect of the work on the general intelligence of the scholar, as to which I have frequently had interesting testimony from experienced head-teachers.

Without going into any details of various schemes, I must remark on one point, so important as hardly to be considered a detail—that is the special drawing, which has always been made a very prominent part of the work in England. By insisting upon a clear, accurate, working-drawing as a preliminary to every exercise or model, the scholar obtains clearness of ideas, and the power of expressing, in a universal language, the ideas which he has in his mind. Argument as to the value of this training is hardly needed, while its common usefulness in after life is obvious.

The secondary aspects of the work are almost too numerous to be mentioned. Amongst them may be named :—

(1) The creation, or encouragement, of a liking for manual work—not a bad feature in these days, when complaints as to the overcrowding of the unskilled, sedentary occupations are so common.

(2) The formation of a general ability to use the hands with skill and dexterity, in any desired direction. This includes the technical advantage to the scholar, in beginning to learn *any* trade or handicraft, when his school-life is over.

(3) The training of the power of observation generally—the encouragement to the pupil to keep his eyes open out of doors, in observing the varieties of leaves, flowers, seeds, etc., of the trees corresponding to the various kinds of timber which he may use or handle in the work-room. In fact, it is "Nature-Study," with very practical illustrations.

Among the objections raised against the subject, the "crowded curriculum" is often brought forward. Without going into a large controversy, I may say I admit some force in this objection. What we must do is to examine the relative values of various subjects, and retain the best. If this is done, I believe Manual Training will be retained, whatever may have to be discarded.

Another objection, which I have often heard, is the "physical unfitness of the child." Now, the possible objections to Manual Training, as to anything else, may be classed as *reasonable, semi-*

reasonable, and *unreasonable*. I do not think I have ever met any in the first class; I have met some in the second, and many in the third. That just mentioned appears to me to occupy a conspicuous place in the third division.

I have actually heard of a head-teacher in England bringing it forward, and stating that he himself had seen children forced to use "baby-planes." Well, what then? Had he never seen boys using "boys'" cricket bats, or infants sitting in school at "infants'" desks, or any children using "children's" dumb-bells or Indian clubs? The objection is almost too ridiculous to be mentioned seriously.

The same teacher went on, apparently under the impression that his satire was scorching, to ask if, supposing we taught dairy-work to country scholars, should we introduce "miniature cows" into the class room? Well, omitting the obvious objections to the presence of live cows in a room, who would not introduce them, *if we could get them?*

To suit the tools to the scholars' strength seems reasonable enough—and the modicum of physical exercise included in the work, involving, perhaps, a little temporary muscular tiredness, is a very good feature in the work.

The "loss of dignity" suffered by the head teacher if his scholars are taken out of his hands for one lesson in the week, has also seriously been paraded as an objection to Manual Training. To my mind, any teacher who makes a point of this makes a naïve confession of weakness, and one can only pity him, and remark "so much the worse for his dignity."

The "danger to the scholars" has been urged against the adoption of the work. Well, most games, sports, and occupations involve some danger, but in this case it has been greatly exaggerated. With good discipline and careful teaching, a class may work for months without a single case of even a small cut. Frequent accidents in a class would form a very strong condemnation of the teacher's powers of supervision.

One word more. An important question is, Who should teach the subject? It appears to me, for many reasons, that the ideal instructor is the head, or class-teacher, who has thoroughly learnt the technology of the work, as well as the educational basis of it, and who takes his own scholars in a class-room at his own school. But at present this is impracticable, for several reasons, and the "centre"

plan, at which a special instructor takes classes from more than one school in the neighbourhood, appears to be the best practical substitute for the ideal system.

And again, with regard to the teacher—he should really be a teacher, trained in the management of a class and practised in educational methods, while to his general qualifications he should have added a fair amount of technological knowledge of wood-work and skill in the use of tools. But in fairness I must add that I have in several instances met instructors in "Manual Training" who had *not* received an ordinary teacher's apprenticeship to the profession, but who were excellent in their methods and results. These were exceptions—"born, not made." And it would be easy to find many of the "made" who are far inferior to these nominally unqualified teachers.

As I am speaking to a general audience, most of whom will probably never actually have to take classes in the subject we are considering, I purposely omit to touch on many points and aspects of the work—one of the most important of these, for example, is the great desirability of some preliminary forms of Manual Training, or "hand-and-eye" work in *all* the classes, before the scholars arrive at the bench-and-tool stage.

The cost of starting the work is another point at which only a passing glance can be thrown. When a suitable room exists in the school, and the teacher on the spot is capable of taking the subject, the cost of equipment is not very great; it may be put, as a rough average, at about $200 to $250 for benches and tools for a class of twenty, while the current and depreciation expenses are by no means large.

In conclusion, I must sound a note of warning to enthusiasts. Manual Training has some reason to raise the old plea "save me from my friends." There is a danger of claiming too much for the work, and so provoking a re-action against it. It will not do everything, it will not produce the millenium in a year or two. But we may fairly claim a place for it as a new, or improved weapon in the armoury of the educational fighter. It is not the *only* weapon, but it should be added to those already in existence, or substituted for some which are obsolete, and the wise, who wish for victory, will adopt it. I have seen a great deal of the work in England, and the more I see of it, the more I feel that it is really good, and will really *do* something in the great crusade which we all have at heart.

You, ladies and gentlemen, have great powers and great influence in your hands; it is your part carefully and critically to examine the subject on all sides, obtaining individually a practical knowledge of its methods, as well as an acquaintance with its rational basis, and having done so I strongly hope—I venture to say I am sure—you will use your power in dispelling false notions on the use and meaning of the work, and will aid it to take its place as a really fruitful help to progress in the all-important cause of general education.

SECOND GENERAL MEETING.

THURSDAY, AUGUST 15th, 8 p.m.

THE DESIRABILITY OF DOMINION REGISTRATION OF TRAINED TEACHERS.

By S. P. Robins, Ll. D.
[Principal McGill Normal School.]

The older members of this Association whose age begins to verge on the limit of human life have seen vast changes in this Dominion. The blaze through the woods has become a beaten path, has developed into a road, and has been succeeded and supplemented by the railway. Now our social organization includes the home, the school, the township, the county, the province, the Dominion; we have coalesced in spirit into an empire, and one great poet of the closing years of the century just departed caught a glimpse of a parliament of nations, of a great world federation.

Now I can readily understand that while beneath the very shadow of the magnificent pile of buildings which is the home of the Central Government of our Dominion, we, as teachers, venture to look up from the trivialities of daily life and to look out upon the course and tendency of our age, some narrow politicians may ask what we have to do with conceptions that reach so far and rise so high. These insignificant teachers what can they do? What are they worth? By the nature of their work excluded from party politics, shut out from party caucuses, active agents at no elections, they count for nothing, they can do nothing. Their salaries are small, their accumulations a negligible quantity, their opportunities of money making absolutely nil; one merchant prince, one captain of industry, one manipulator of public trusts, one filcher of public franchises could buy them all up. Pinched by penury in youth given up to painful economies in their family life, sinking in old age into unregarded shabbiness, they are worth nothing. Yet some of them

are not wholly destitute of ability ; in some other line of life they might accomplish something ; what idiots they are. But pause a moment my ultra-materialistic friend. Weigh your words better. Teachers are not to be accused of empty minds and of lack of energy. If you are to maintain your contemptuous estimation, you must call them, not idiots, but maniacs rather megalomaniacs, who entertain grand illusions and misdirect great energy. Their illusion is this, that separating themselves from those who estimate national greatness by dollars and acres, by the abundance of sea and of land, by vast inland seas burdened by a daily increasing commerce, and by the rivers of half a continent falling to the sea whose tumultuous rush can be and will be transmitted into light and heat and power, separating themselves from the mere materialists and joining themselves with the preachers, the singers and the press who estimate the greatness of a people by their intelligence and their virtue, they, the teachers whom you pass so superciliously, entertain the astounding belief that they will have no small share in shaping the future of this Dominion. If the teachers of to-day think with precision, the active business men of ten years hence will be clear sighted. If the teachers who are now toiling in our schools think broadly, comprehensive views will be the characteristic of 1925. If these teachers entertain high ideals, our national desires and purposes will grow to be worthy of our noble origin and of our magnificent opportunities.

Now, we do not claim that the national future is ours, it is God's. It belongs to that God who during countless aeons of preparation shaped crude chaos into a cosmos fitted for man's reception, and then through millenniums of turbulent history has wrought our present civilization, and again through it and by it is leading the human race onward and upward to a consummation more glorious than we can conceive. God's ideals differ from ours. He who through the barren, limitless fields of space scatters with lavish profusion planets, suns, constellations, galaxies of glory, but who dwells with men of humble mind, values and teaches us to value lofty thought and sublime morality. To Him the development of truth in thought and character among a people is more important than all the material progress of which we are too ready to boast. And I do not doubt that He, grieved by our follies and mistakes, is yet guiding our uncertain steps towards a worthy education of our people. While consolidation of material interests characterizes the age, education will not remain fragmentary and disunited. In the general unification

of thought and action, unification of education will surely come. Not an enforced unification by pressure from without, but a unification brought about by the free consent of independent wills,—by the organizing power of an inward vitality.

Symptomatic of this incipient unification is the formation and maintenance of the Dominion Educational Association. Forty years ago some of us endeavored to effect a confederation of the then existing isolated Teachers' Association. But the time was not ripe. Though the confederation of these Canadian Provinces was a dream in the thought of a few far-seeing statesmen, it had not yet taken shape. All our interests were isolated. The time for this Dominion Association had not come. But the effort was not wholly fruitless; a living germ-thought was planted in the minds of educators. The premature effort was not a lost effort, it prepared the way, it disposed many of us to second heartily the proposals of the present Premier of Ontario, who had that nice appreciation of time and men and the movement of educational thought that enabled him to see that a Dominion Association was not only desirable, but possible ; and who had the influence and the tactful organizing skill that transformed the possible into the actual. Are we, any of us, so dull as to suppose that this, as yet, infant Association, in such work as we are doing at this meeting, useful though it is, is showing the fulness of its strength? Are we so destitute of imagination as to see no promise of more commanding influence in days not so remote but that you, the younger members of the teaching profession, will see it? This Association, as it is the product so it is a necessity of our time. If we entertain so imperfect a conception of our responsibilities, if we permit ourselves to cherish such contemptible jealousies, if we are so supine that we allow this Association to lapse, or undervalue and neglect the opportunities it offers ; then surely, a little later, a wiser, a more generous and a more enterprising race of teachers will establish an enduring Association to accomplish the work by us abandoned. This Association, or in its default another Association, will surely undertake and accomplish great things in relation to the unification of education in this Dominion, and that as preparatory to taking its share in the unification of education throughout the empire. Not only will it, as I trust it will, undertake the discussion of, and aid in replying to wide, interesting questions yet unanswered in the realm of pure pedagogy ; but it will take its part in the adjustment of many perplexing problems yet unsolved in the realms of the state economics of education.

Atlantic," from which I have just come. I do not wish to be there again just yet—I hope you will not have occasion to express the wish for me.

For the subject of my remarks, I will turn to one with which I am specially concerned in England—that of Manual Training. So much has been written, and so much has been said in recent years on both sides of the ocean, on this subject ("in the last few minutes, in this room" one might almost add) that it is difficult to say anything very new or striking. Anyone wanting to address such an audience as this, is likely to be in the position of a preacher, preaching to the converted, and so wearing his listeners with familiar platitudes. Nevertheless, the adventure must be made occasionally—partly in the hope of presenting the subject in a new light, of supplying a few additional argumentative shots for use against a hostile world outside, and so assisting to form public opinion, which for several reasons is likely to be antagonistic to a movement, in which the most active inquirers see great promise.

It is necessary to insist, most emphatically and on every possible occasion, that Manual Training has for its fundamental idea the *general educational good* of the child; that it is not technical, and that "carpentry" does *not* describe it or its aims. Only this week in a Canadian daily paper, I saw it referred to under the name of "carpentry," with a suggestion that it should be taught, if taught at all "on Saturdays or in the evening." To adopt such a suggestion as this would be very inimical to its progress, as it is essential that it should be regarded as an integral part of the child's ordinary school-work.

The "carpentry," notion has always been something of a difficulty, and has been the source of trades-unions' objections to it. In Liverpool, for example, which was one of the earliest towns in England to adopt Manual Training in its primary schools, the local artistans (joiners and others) strongly protested against it, but some public meetings and opportunities for seeing the real scope and objects of the work, led to the gradual dying out of their unfounded objections.

Now although you ladies and gentlemen are not necesssarily experts in our work—perhaps *because* of this reason—it is most important, for its successful development, that you, and all public school teachers, should take an intelligent and friendly interest in it. Although it is necessary, at present, to employ special instructors,

yet I venture to say that the success of the movement, so admirably begun in Canada, depends very largely on the attitude towards it of teachers generally. This is almost *a priori* evident, and I know by experience in England that the statement is true. If the teacher—the ordinary teacher—is indifferent, he "creates an atmosphere" about the subject which is bound to affect the scholar, at his imitative and impressionable age, who will accordingly take but a languid interest in his Manual Training course. If the teacher is actually hostile, he may easily counteract, by chance remarks and allusions on nine half-days in the week, the work of the special teacher on his one half-day.

It must be assumed that teachers feel some enthusiasm for the cause of primary education, upon the soundness of which depends the value of all future secondary or technical training. This being so, the teacher must, as in duty bound, examine with a critical, but unprejudiced eye, any new ideas, or revival of old ones, for which is claimed some educational value.

Now, the teacher is naturally a conservative person—at least, he is in England—and generally "shy" of new departures. His arduous, exacting, often wearisome, work renders him prone (may I say it with all sympathy and without offence?) to like old methods, and to distrust new.

It is therefore natural for him to be cautious, and to ask "is this new idea good?" (I say "new," because although in essence it may be found in Comenius, Locke, Rousseau, Richter, Froebel, Pestalozzi, &c., its recent developments are on new and special lines.)

Locke long ago pointed out the curious uncertainty of an *a priori* notion in educational work; yet if one can show good reasonable grounds for some new methods, it is at any rate reasonable to give them a practical experimental trial. For Manual Training we may claim:—

(*a*) A rational theoretical basis, founded on known facts in the psychology and physiology of children—in other words one might almost say on organized common-sense.

(*b*) Some experimental justification by experience in countries where the subject has now had some years for trial.

The child has naturally a super-abundance of energy, which is, in a normal way, used-up by his activity in play, in his shouting, running, jumping—his "fidgets" when he is required to sit still by unthinking elders, during a long sermon for example. Nearly

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everyone now recognizes the cruelty of forcing a child to be bodily at rest, exercising his brain only, for long periods of time. Kindergarten methods and play-intervals have in recent years, fortunately, shown our recognition of this fundamental physiological truth. But Kindergarten methods have been applied too exclusively to the very young—the plea for Manual Training is largely a plea for their continuance throughout the child's school-life.

Now, in looking round for suitable means of satisfying the given requirements, evidently we must first consider the provision of suitable material and apparatus. We wish to exercise and develop the natural constructive faculties of the child in the best possible way. When he has obtained, by growth, a certain modicum of strength and intelligence, what does he commonly love to do? Does he not pick up a piece of one of the commonest materials around him—wood—obtain some sharp-edged tool (generally a knife—or his father's razor), and "whittle"—at first from sheer liking for chips, and later attempt to fashion some familiar article, or desired instrument of amusement?

What can be more "sweetly reasonable" than to seize upon this universal feature of child-life, and to make it the basis of an organized scheme, whereby his constructive faculties are gradually trained, his mind is exercised and developed in forming clear concepts, and his bodily powers are so directed and strengthened as to make him able, with ever increasing delicacy and accuracy, to reproduce in solid material, the pictures which he has formed in his mind?

Believers in the value of Manual Training maintain, with approximate unanimity, that all these desirable ends may best be met, in a practical and efficient manner, by the use of wood and wood-working tools. The choice of these has, of course, opened the door to the "carpentry" or "trade union's" objection, to which reference has been made already, but this difficulty is not serious enough to form a real bar to progress. Even with the risk of wearying my audience, I must repeat, most emphatically, that the primary object of the work is purely educational; to train hand, eye, and brain to work together; to foster and develop habits of exactness, order, neatness, accuracy—it is not too much to say also of truth. It is no wild talk of theoretical pedagogues to say that the moral value of Manual Training is considerable, it includes the formation of an ideal, and then the attempt to realise it, the power of realisation gradually in-

creasing as the pupil progresses in the course, and forming an ever-growing pleasure to him.

But in a short address one cannot pay anything like an adequate amount of attention to this, the most important radical aspect of our subject. Neither can I refer, except in passing, to the effect of the work on the general intelligence of the scholar, as to which I have frequently had interesting testimony from experienced head-teachers.

Without going into any details of various schemes, I must remark on one point, so important as hardly to be considered a detail—that is the special drawing, which has always been made a very prominent part of the work in England. By insisting upon a clear, accurate, working-drawing as a preliminary to every exercise or model, the scholar obtains clearness of ideas, and the power of expressing, in a universal language, the ideas which he has in his mind. Argument as to the value of this training is hardly needed, while its common usefulness in after life is obvious.

The secondary aspects of the work are almost too numerous to be mentioned. Amongst them may be named :—

(1) The creation, or encouragement, of a liking for manual work—not a bad feature in these days, when complaints as to the overcrowding of the unskilled, sedentary occupations are so common.

(2) The formation of a general ability to use the hands with skill and dexterity, in any desired direction. This includes the technical advantage to the scholar, in beginning to learn *any* trade or handicraft, when his school-life is over.

(3) The training of the power of observation generally—the encouragement to the pupil to keep his eyes open out of doors, in observing the varieties of leaves, flowers, seeds, etc., of the trees corresponding to the various kinds of timber which he may use or handle in the work-room. In fact, it is "Nature-Study," with very practical illustrations.

Among the objections raised against the subject, the "crowded curriculum" is often brought forward. Without going into a large controversy, I may say I admit some force in this objection. What we must do is to examine the relative values of various subjects, and retain the best. If this is done, I believe Manual Training will be retained, whatever may have to be discarded.

Another objection, which I have often heard, is the "physical unfitness of the child." Now, the possible objections to Manual Training, as to anything else, may be classed as *reasonable, semi-*

reasonable, and *unreasonable*. I do not think I have ever met any in the first class; I have met some in the second, and many in the third. That just mentioned appears to me to occupy a conspicuous place in the third division.

I have actually heard of a head-teacher in England bringing it forward, and stating that he himself had seen children forced to use "baby-planes." Well, what then? Had he never seen boys using "boys'" cricket bats, or infants sitting in school at "infants'" desks, or any children using "children's" dumb-bells or Indian clubs? The objection is almost too ridiculous to be mentioned seriously.

The same teacher went on, apparently under the impression that his satire was scorching, to ask if, supposing we taught dairy-work to country scholars, should we introduce "miniature cows" into the class room? Well, omitting the obvious objections to the presence of live cows in a room, who would not introduce them, *if we could get them?*

To suit the tools to the scholars' strength seems reasonable enough—and the modicum of physical exercise included in the work, involving, perhaps, a little temporary muscular tiredness, is a very good feature in the work.

The "loss of dignity" suffered by the head teacher if his scholars are taken out of his hands for one lesson in the week, has also seriously been paraded as an objection to Manual Training. To my mind, any teacher who makes a point of this makes a naïve confession of weakness, and one can only pity him, and remark "so much the worse for his dignity."

The "danger to the scholars" has been urged against the adoption of the work. Well, most games, sports, and occupations involve some danger, but in this case it has been greatly exaggerated. With good discipline and careful teaching, a class may work for months without a single case of even a small cut. Frequent accidents in a class would form a very strong condemnation of the teacher's powers of supervision.

One word more. An important question is, Who should teach the subject? It appears to me, for many reasons, that the ideal instructor is the head, or class-teacher, who has thoroughly learnt the technology of the work, as well as the educational basis of it, and who takes his own scholars in a class-room at his own school. But at present this is impracticable, for several reasons, and the "centre"

plan, at which a special instructor takes classes from more than one school in the neighbourhood, appears to be the best practical substitute for the ideal system.

And again, with regard to the teacher—he should really be a teacher, trained in the management of a class and practised in educational methods, while to his general qualifications he should have added a fair amount of technological knowledge of wood-work and skill in the use of tools. But in fairness I must add that I have in several instances met instructors in "Manual Training" who had *not* received an ordinary teacher's apprenticeship to the profession, but who were excellent in their methods and results. These were exceptions—"born, not made." And it would be easy to find many of the "made" who are far inferior to these nominally unqualified teachers.

As I am speaking to a general audience, most of whom will probably never actually have to take classes in the subject we are considering, I purposely omit to touch on many points and aspects of the work—one of the most important of these, for example, is the great desirability of some preliminary forms of Manual Training, or "hand-and-eye" work in *all* the classes, before the scholars arrive at the bench-and-tool stage.

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of thought and action, unification of education will surely come. Not an enforced unification by pressure from without, but a unification brought about by the free consent of independent wills,—by the organizing power of an inward vitality.

Symptomatic of this incipient unification is the formation and maintenance of the Dominion Educational Association. Forty years ago some of us endeavored to effect a confederation of the then existing isolated Teachers' Association. But the time was not ripe. Though the confederation of these Canadian Provinces was a dream in the thought of a few far-seeing statesmen, it had not yet taken shape. All our interests were isolated. The time for this Dominion Association had not come. But the effort was not wholly fruitless; a living germ-thought was planted in the minds of educators. The premature effort was not a lost effort, it prepared the way, it disposed many of us to second heartily the proposals of the present Premier of Ontario, who had that nice appreciation of time and men and the movement of educational thought that enabled him to see that a Dominion Association was not only desirable, but possible ; and who had the influence and the tactful organizing skill that transformed the possible into the actual. Are we, any of us, so dull as to suppose that this, as yet, infant Association, in such work as we are doing at this meeting, useful though it is, is showing the fulness of its strength? Are we so destitute of imagination as to see no promise of more commanding influence in days not so remote but that you, the younger members of the teaching profession, will see it? This Association, as it is the product so it is a necessity of our time. If we entertain so imperfect a conception of our responsibilities, if we permit ourselves to cherish such contemptible jealousies, if we are so supine that we allow this Association to lapse, or undervalue and neglect the opportunities it offers ; then surely, a little later, a wiser, a more generous and a more enterprising race of teachers will establish an enduring Association to accomplish the work by us abandoned. This Association, or in its default another Association, will surely undertake and accomplish great things in relation to the unification of education in this Dominion, and that as preparatory to taking its share in the unification of education throughout the empire. Not only will it, as I trust it will, undertake the discussion of, and aid in replying to wide, interesting questions yet unanswered in the realm of pure pedagogy ; but it will take its part in the adjustment of many perplexing problems yet unsolved in the realms of the state economics of education.

One such question is before us now. It is this,—Can we in any way secure recognition of tried and competent teachers, beyond the boundaries of the Provinces in which they have been trained? The attempt now being made by the medical profession to secure a Dominion registration, without which doctors of medicine cannot receive British recognition, inasmuch as the British authorities will not consider merely provincial diplomas, suggests that we teachers also should endeavor to obtain some sort of Dominion registration, not so much in our personal interest as in the interest of the Dominion. Our Dominion stretches in a narrow line of settlements from the Atlantic to the Pacific. It threatens to break into a series of detached communities, each sufficient for itself, thinking its own thoughts and speaking its own dialect. Already provincial peculiarities obtrude on the traveller, and these peculiarities are emphasized in the case of teachers, whose pronunciation, manner and style formed in the narrow circle of their homes, their local public school, and their local training school, are not corrected by the larger intercourse with many men that corrects local tendencies in men of affairs. If the best of teachers moved more readily from Province to Province, they, themselves, would grow broader, and would help to counteract the petty, parochial feeling and aims of narrow-minded people.

It would be premature to detail at the present moment any scheme for accomplishing this. We are not now prepared for it. But, perhaps, this Association might move towards this end in a cautious manner by appointing as a Standing Committee a small number of trustworthy, experienced and influential members to examine the credentials of such teachers as might desire to come before it. This Committee from its investigations might certify that such and such a teacher had pursued certain studies and taken a certain standing in them at a high school, a college or a university of known repute; that he had been trained as a teacher at an institution whose curriculum and staff warrant the confidence of this Association; and that by a course of practical work the details of which were known to the Committee, he had demonstrated his ability both to teach and to govern.

Such a certificate would not be a valid diploma in any Province, but it would carry great weight with the authorities charged with the duty of conferring such diplomas. After a little hesitation and

possibly after a term of probation, such certificates would be accepted at their full value both by the several Provinces and by many of the States of the Union. Certain additional examinations might be demanded in such subjects as school law and regulations, and the special history and geography of the individual Province or State, but school authorities would not deem it necessary by new examinations to go over the ground covered by the certificate.

Such a step taken by the Dominion Association of Teachers would be a distinct gain to the larger interests of education in the Dominion.

PATRIOTISM IN SCHOOLS.

By Mrs. Clark Murray, Montreal.

It is not the aim of education to eradicate any of the sentiments which are natural to the human mind. Nature does not work in vain; and the sentiments, with which she endows us, have a purpose and significance, even if it be merely to give us a better chance in the struggle for existence. But our natural sentiments are often misdirected, and thereby defeat their beneficent purpose. It becomes therefore one of the functions of education to train these sentiments so that they may fulfil the function which they are designed to serve in human life. This is the case with the sentiment of patriotism. It does not need to be created by the teacher. It is there already as part of the material upon which he has to work. Innumerable Associations from the very beginning of life weave their chains of attachment to the whole environment amid which a human being is brought up. It is thus that, without any special effort on our part, we find ourselves stirred by love of our homes, of our immediate neighbourhood, of our circle of friends, of our school, of our church, of our country.

These sentiments cannot be ignored by the teacher. His aim must rather be to train them by such rational guidance that they shall form an effective inspiration to all that is good. How, then, is this to be accomplished in the case of patriotic sentiment? It cannot be denied that the present is a peculiarly favourable time for fac-

ing such a question. All over the British Empire there has been such an invigoration of patriotic feeling as, it is safe to say, has never been witnessed since a Greater Britain began to arise beyond the seas. Up to this time, the leading sections of the Empire—Canada, Australia, South Africa, India—were so isolated, not only in geographical position, but unfortunately even in sentiment, that any community of interest was scarcely ever imagined or felt. But the war in South Africa has offered an occasion for community of action in defence of the common Empire; and the occasion has called forth a patriotic passion of such an imperial range and force as has undoubtedly startled the world.

It seems therefore obviously desirable to take advantage of an opportunity so favourable for confirming and directing this gain of the war. And the question proposed to this convention is, whether the schools of the Dominion might not give effective help in this direction. The task need not interfere with the general work of the schools, nor should it add in any way to the burden of work imposed on teachers or pupils. On the contrary, it might rather form a helpful inspiration to educational work, and a refreshing break in the somewhat monotonous routine of school life. The object in view might, of course, be accomplished in a great variety of ways. But, to be effective, some little portion of the school-year would require to be specially set apart for the purpose. Half an hour at certain intervals—such as once a month or in every term—should, in general, be quite sufficient. Such an occasional half hour should not be difficult to reserve just before school is dismissed, after the regular lessons of the day are over. Of course a good deal of discretion might be left to the individual teacher or the Principal of each school as to the employment of time allotted. But it seems appropriate that the time should be partly, or occasionally, devoted to a brief lesson giving information of interest with regard to the Empire either as a whole or in its most important parts, so that the children, attending our schools, might grow up with some intelligent idea of the Empire, with which they may thus feel proud to claim connection. A great deal of knowledge might be communicated in this agreeable way,—knowledge that will be useful to boys and girls who have to take their part in the social duties that devolve on all subjects of the King in general, and on Canadians in particular.

But to obtain this object it is essential that some emotional stimulus should be given,—an emotional stimulus which may excite curiosity and create an interest in the imperial subjectsonwhich information is communicated. This stimulus might be imparted by various little ceremonies of a simple symbolic significance, such as might easily be interpreted by young minds, and such as appeal powerfully to their unsophisticated feelings. For instance, it is suggested that the pupil who is a leader in the school at the time, who has carried the palm for the month or term by his superority in lessons or in general conduct, should be appointed standard-bearer for the occasion. He might appoint certain adjutants, or they might be selected from those who come next to him in the order of merit. These might be instructed to hoist the flag of the Empire with more or less ceremony according as circumstances will allow; and the whole of the scholars might take part in some more or less ceremonious salutation of the flag. Such a salutation, if nothing more ceremonious seems desirable or possible, might be merely a good ringing cheer at the hoisting of the flag,—a cheer led by the general and his adjutants.

As music is preminently the emotional art, it need scarcely be suggested that its assistance should be sought to heighten the inspirations of the day. Whenever instrumental music is attainable, especially if a school has attained to the possession of an instrumental band, of course some stirring patriotic airs would be eminently appropriate. But in all schools patriotic songs are available, and these are generally of wider influence than melodies that are simply played by a few performers, because all the pupils can take part in a song, especially when it has a good swinging chorus, The general effect of this part of the day's proceedings could be increased by some of the best readers in the school being appointed to recite passages descriptive of noble patriotic achievements or expressive of noble patriotic sentiment.

It is suggested that the day set apart for this purpose should be known as the Chapter Day of the school. The patriotic society—the Daughters of the Empire—is prepared to supply programmes for the direction of the principals and teachers of schools in the arrangement of such a day. It will also supply, at cost price—ten cents a piece—badges of a pretty design, which are to be worn by pupils on the Chapter Day of their school, as well as on other days of imperial

significance. With such proceedings as have been sketched in this paper, so far from adding to the burdens of school life, Chapter Day might fairly be expected to become an event, to which pupils, and teachers too, would look forward as a festival to be ranked among their recreations rather than their toils.

There is reason to believe that the movement for such a festival will soon spread throughout the Empire. It has already been adopted in individual schools in different parts of England, and it is now under consideration by the London School Board. In Edinburgh and Dublin also the matter is to be taken up. The movement is making its way into Australia, New Zealand, India, and will be started in South Africa as soon as circumstances permit. It may be pretty generally known to members of the Convention that the movement has already taken hold in the schools of Canada; and what is desired is, that the Convention should lend its support to the movement by such action as may commend it to the teachers of the Dominion.

COMMENT CULTIVER LE SENTIMENT NATIONAL A L'ECOLE PRIMAIRE.

CONFÉRENCE DONNÉE PAR M. C. J. MAGNAN DEVANT L'ASSOCIATION D'EDUCATION DU CANADA, À OTTAWA, LE 15 AOÛT 1901.

M. le President, Mesdames et Messieurs,—Un des écrivains les plus en renom de la France actuelle, M. Brunetière, disait tout récemment, devant une société d'Education et d'Enseignement, les belles paroles qui suivent: "Une éducation nationale ne peut avoir d'autre objet que de développer, que de fortifier ces sentiments qui font l'âme commune de la patrie, en nous rattachant non seulement entre nous mais surtout à nos morts." (1)

Apprendre aux enfants à aimer leur patrie, leur apprendre à vivre dans la paix et l'union avec leurs concitoyens, leur apprendre surtout à connaître et à aimer les grandes figures qui composent en quelque sorte l'histoire tout entière du Canada, voilà un des buts, et ce n'est pas le moindre, que doit se proposer l'instituteur dans l'éducation des enfants qui lui sont confiés.

L'idée de patrie, après l'idée de Dieu, voilà donc ce qu'il importe de développer à l'école primaire.

Il y a des écrivains qui ont combattu et qui combattent encore cette noble et féconde idée de patrie.

Ils ont dit et ils nous disent encore que la Patrie est un vieux prejugé; qu'il n'y a que l'humanité. Sous le prétexte de faire l'homme, ils suppriment le citoyen, et prétendant servir le genre humain, ils suppriment tout simplement la Patrie. C'est ainsi qu'on a créé le Cosmopolitisme, l'une des plus monstrueuses erreurs que nous ait léguéés le siècle qui vient de finir.

Des 1872, l'historien H. Martin combatit avec vigueur et succès tous les Sans-Patrie qui avaient élu domicile en Francs. Dans un discours prononcé à l'Ecole normale de Laon, l'auteur renommé s'écriait :

"Ceux qui font la guerre à l'idée de patrie précipitent les peuples dans la mort et dans le néant.

"A vous, instituteurs, de combattre ces faux préjugés au nom de la religion de la Patrie.

"Je n'emploie pas à la légère ce terme de religion: la Patrie n'est point une création arbitraire de la volonté humaine. C'est Dieu qui a institué la Patrie comme la famille. C'est la sagesse éternelle qui a fondé l'ordre de ce monde sur la division du genre humain en nations diverses ayant chacune leur génie et leurs fonctions propres. Les ennemis de l'idée de Patrie sont en révolte contre les lois éternelles aussi bien que contre les lois humaines."

Le 20 de juillet 1899, le Père Didon, l'un des plus célèbres disciples de Lacordaire, prononçait à l'école d'Arcueil un beau discours, pour revendiquer la part du Sentiment dans l'éducation de la jeunesse. Parmi les sentiments susceptibles de devenir ainsi des ressorts d'âme et des pivots de vie morale, le Père Didon place au premier rang: L'Amour de la Patrie, et il adresse à un disciple imaginaire cette superbe et pathétique exhortation :

"N'écoute pas, ô mon disciple, ceux qui te disent que le patrie n'est qu'un préjugé étroit, qu'il faut aimer l'humanité, que cela suffit; non, tu sais bien que l'humanité est composée de patries et que les

(1) Extrait d'un discours de M. Brunetière, prononcé le 24 mai, 1901, devant la société d'Education et d'Enseignement catholique de la France.

patries sont d'institution divine, comme les familles. Elles forment dans le grand ciel humain des constellations mystérieuses, immuables.

"N'écoute pas ceux qui disent: les nations vieillissent et meurent.

"Et toi, fils de France, pénètre-toi de cette conviction ardente que ta patrie est nécessaire à l'humanité, quisqu'elle représente, au milieu des autres pays, la force au service du droit, le secours toujours donné aux opprimés et aux injustement vaincus.

"N'écoute pas ceux qui voudraient faire d'elle une Athènes, une académie, un conservatoire, un théâtre, un jardin de plaisir, et qui, méconnaissants—les sophistes!—le rôle sacré de la force, voudraient briser les dents du lion, couper ses griffes, énerver ses muscles.

"Non, travaille à donner à ton pays la puissance matéreille qui s'impose à l'heure tragique où il faut que la force reste à la justice et au droit.

"N'écoute pas ceux qui rêvent de la domination exclusive d'un parti et dont l'idéal serait une France coupée en deux, l'une esclave à merci, l'autre triomphante à merci.

"Travaille à l'unité de ton pays, que ton patriotisme soit hanté par le rêve de l'unité de tes concitoyens. Si tes idées l'emportent, gouverne selon tes idées, mais ne refuse jamais la tolérance à tes adversaires, respecte-les comme une opposition nécessaire. Tu auras grandement agi si tu te souviens de ce mot de Vercingétorix, le glorieux vaincu:

"La Gaule, unie et animée d'un même esprit, peut défier l'univers."

Changeons quelques mots, modifions certaines pensées et cette forte page convient à tous les pays de la terre.

Mesdames et Messieurs, permettez-moi d'appliquer quelques-uns des passages de la citation qui précède aux conditions particulières de notre patrie commune, le Canada: Travaillons à donner à notre pays la puissance matérielle nécessaire aux jour d'épreuves; mais, de grâce n'écoutons pas ceux qui, au Canada, rêvent la domination exclusive d'une nationalité et dont l'idéal serait une patrie coupée en deux, l'une triomphante et l'autre esclave. Non, non! ce n'est pas ainsi que le peuple canadien pourra devenir fort. Si nous voulons sincèrement assurer au Canada un avenir durable, il nous faut de toute nécessité créer un sentiment national dont la justice et l'amour de la patrie formeront la base; un sentiment national assez puissant pour servir de rempart aux minorités, quelles qu'elles soient, sur tous

les points du Dominion ; un sentiment national assez puissant pour faire remonter l'amour de notre patrie aux sources mêmes de son histoire, c'est-à-dire au 16ème. siècle.

Mais pour créer un pareil sentiment national, il faut, pour l'instituteur, qu'il comprenne ou plutôt qu'il sente bien ce que c'est que la patrie. Emile Souvestre a dit avec une précision charmante: " La patrie, c'est la famille en grand, c'est le morceau du monde où Dieu a attaché notre corps et notre âme." Cette définition est très belle, mais elle n'est pas à la portée des enfants. Si j'avais à expliquer ce mot de patrie à des élèves d'écoles primaires, voici, il me semble, à peu près en quels termes je leur parlerais :

—Mes bien chers petits compatriotes, jusqu'à ce jour, pour vous, la patrie, c'est tout ce qui vous entoure, tout ce que vous aimez. La chambre où travaille votre mère, la maison paternelle, les voisins, les champs, les arbres, le vieux,cimetière où reposent les parents et les camarades défunts, la petite école, le bon curé de la paroisse, le clocher du village, c'est la patrie ! Vous la voyez, vous la respirez partout, cette chère et bien-aimée patrie.

Néanmoins, la patrie ce n'est pas seulement le berceau.

"Où l'on aima sa mère, où l'on connut son Dieu,

"Où naissent les enfants dans la chaste demeure,

"Où sont tous les tombeaux des êtres que l'on pleure.

C'est bien plus que cela !

La patrie, c'est avant tout l'ensemble des institutions à l'abri desquelles votre père a pu établir sa maison, y économiser le fruit de son travail, y aimer votre mère et donner la nourriture et l'éducation à ses enfants.

La patrie, c'est encore une puissance bienveillante et sévère qui veille sans cesse à nos côtés pour faire respecter nos droits, qui nous permet de vivre paisibles dans notre maison, pour jouir du fruit de nos labeurs et du bonheur du foyer domestique.

Si nous sommes libres, c'est-à-dire soustraits à la domination du plus fort et du plus habile ; si nous pouvons accomplir nos devoirs sans entraves, exercer librement notre religion : c'est grâce à la patrie ; c'est aussi sous la protection de la patrie que l'éducation se répand, que l'agriculture se perfectionne, que l'industrie se développe, que le commerce prospère et que les sciences et les arts fleurissent.

Figurez-vous, mes jeunes amis, vos droits et vos devoirs, votre bonheur et votre liberté, vos affections et vos espérances, vos souvenirs et votre reconnaissance ; réunissez tout cela sous un seul nom, et ce nom-là sera la Patrie !

Si la patrie tient une si large place dans notre existence, si nous lui devons, après Dieu et la religion, tout ce que nous possédons, tout ce que nous sommes, nous devons donc aimer à connaitre sa Constitution et ses Institutions, afin de pouvoir la servir avec amour et fidélité. Et comme elle est facile a servir, la patrie canadienne, exige peu de ses enfants !

Obéir à ses lois, contribuer à la richesse nationale, voter Librement et Consciencieusement au jour du scrutin.

Vous devez vous estimer heureux, bien aimés jeunes gens, de vivre dans un pays où le service militaire est libre, où le climat est des plus salubres, le sol fertile ; dans un pays où le territoire est parsemé d'une quantité innombrable de lacs, arrosé de nombreuses rivières et couvert de riches forêts de toutes sortes ; dans un pays enfin, où la soumission aux lois est admirable, la liberté individuelle parfaitement assurée, la religion profondément respectée et le droit de propriété sincèrement reconnu. La Constitution politique du Canada nous permet de jouir en paix de ces immenses bienfaits, et ses Institutions favorisent le développement de nos forces nationales.

Jeunes Canadiens ! n'oubliez pas que le droit public dont nous jouissons a été inscrit article par article dans la Constitution canadienne, après des efforts héroïques et des luttes parlementaires gigantesques ; que cette Constitution elle-même a été arrachée lambeau par lambeau à l'oligarchie grâce aux efforts des générations qui nous ont précédés.

N'oubliez pas aussi que les deux nobles races qui habitent le Canada ont des droits égaux, et que jamais une de ces deux races ne doit chercher à dominer l'autre : du maintien de cette égalité nationale dépend le salut de notre patrie.—

Il est facile de comprendre, Mesdames et Messieurs, que la culture du sentiment national à l'école ne saurait se faire par intermittence. Non : cette éducation, comme toute autre éducation, d'ailleurs,

doit se donner à petite dose, un peu chaque jour ; et cet enseignement, plutôt occassionnel que direct, se greffe tout naturellement, en grande partie du moins, sur celui de l'histoire.

Quel caractère doit revêtir l'enseignement de l'histoire nationale dans nos écoles canadiennes, voilà ce que nous allons traiter brièvement dans la seconde partie de notre travail.

II

Si nous admettons que le sentiment national peut et doit être cultivé à l'école, il faut donc nous hâter de conclure qu'à l'histoire incombe le glorieux devoir de faire aimer et de faire comprendre la patrie. Mais le patriotisme qu'il est nécessaire d'éveiller et de former chez l'enfant, doit être un patriotisme VRAI, c'est-à-dire un patriotisme qui est à la fois Un Sentiment et La Notion Du Devoir.

"Or, suivant l'heureuse expression d'Ernest Lavisse, tous les sentiments sont susceptibles d'une culture et toute notion d'un enseignement."

L'histoire doit donc cultiver le sentiment et préciser la notion. C'est pourquoi il faut rejeter les conseils de ceux qui, au Canada, prétendent que le maître ne doit enseigner que très sommairement les trois premiers siècles de notre histoire nationale. Dans certains milieux, on est prêt à réduire l'enseignement de l'histoire du Canada au siècle dernier ; de 1759 à nos jours.

Non, messieurs, cette méthode historique est fausse et injuste : elle cherche ni plus ni moins à rejeter dans l'ombre les grands noms des premiers pionniers francais qui ont exploré si courageusement l'Amérique du Nord.

Il y a dans le glorieux passé qui s'étend du 1534 à 1759 une poésie qu'il faut verser dans l'âme des jeunes Canadiens, quelle que soit leur origine, pour y fortifier le sentiment patriotique.

Faisons-leur aimer nos vaillants ancêtres : Jacques-Cartier à Gaspé, a Stadaconé et au Mont-Royal; Champlain à Québec et sur les rives des Grands Lacs ; Laviolette aux Trois-Rivières ; de Maisonneuve à Montréal ; Marquette, Lasalle, de La Vérendrye dans leurs courses étonnantes ; Dollard au Long-Sault ; Brébœuf et Lallemant versant leur sang par amour pour l'Evangile ; Montcalm et Wolfe, mourant tous deux sur les hauteurs de Québec au service de leur

patrie respective ; Lévis et Murray luttant désespérément sous les murs de la vieille capitale, le premier pour sauver l'honneur des armes francaises et le second pour assurer un nouveau royaume à son roi. Et dans la suite, mettons toujours en parallèle les représentants attitrés des deux races qui ont compris que la grandeur et la prospérité du Canada reposent tout entière sur l'esprit de justice qui doit animer les Canadiens, qu'ils soient d'origine anglaise ou d'origine francaise.

D'un côté, nous mentionnerons avec bonheur les noms de Murray, Dorchester, Elgin, Dufferin, Baldwin, etc.; de l'autre, nous rappelerons avez orgueil les évêques Briand, Plessis, Lartigue, et les patriotes Bédard, Papineau, Parent, Lafontaine, Morin, Garneau, Etc.

Enfin en enseignant l'histoire, apprenons aux enfants à respecter les croyances et les droits de tous les sujets britanniques, sans exception ; de respecter les croyances, les affections, les droits et jusqu'aux rêves légitimes de tous les sujets du Roi, même de ceux qui parlent et parleront toujours "le Doux Parler De France" sur les bords du Saint-Laurent.

Ainsi compris, l'enseignement de l'histoire anime l'âme des enenfants de nobles et généreux sentiments, il prépare l'élève d'aujourd'hui à remplir dans la suite les grands devoirs de citoyens.

Enseignement Moral et Patriotique : voilà donc l'aboutissant de l'enseignement de l'histoire à l'école primaire. Pour atteindre un but aussi utile, cet enseignement ne doit pas consister uniquement en des exercises purement mnémoniques.

Ecoutons à ce sujet, un écrivain autorisé dont nous avons mentionné le nom il y a un instant :

"Si l'enseignement de l'histoire ne doit laisser dans la mémoire que des noms, c'est-à-dire des chiffres, autant vaut donner plus de temps à la grammaire et à l'arithmétique, et ne pas dire un mot de l'histoire. Rompons avec les habitudes acquises et transmises ; n'enseignons pas l'histoire avec le calme qui sied a l'enseignement de la règle des participes. Il s'agit ici de la chair de notre chair et du sang de notre sang. Pour tout dire, si l'écolier n'emporte pas avec lui le vivant souvenir de nos gloires nationales ; s'il ne sait pas que ces ancêtres ont combattu sur mille champs de batailles pour de nobles causes ; s'il ne devient pas un citoyen pénétré de ses devoirs, l'instituteur aura perdu son temps."

III

Nous admettons donc qu'il incombe à l'instituteur d'implanter l'amour de la patrie dans le coeur de l'enfant ; nous admettons aussi qu'il appartient surtout à l'histoire de faire connaître et aimer le pays natal. Voilà pourquoi les éducateurs canadiens doivent se pénétrer profondément de la grandeur et de l'importance de leur rôle.

Que tout esprit sectaire ou fanatique soit donc banni de l'école primaire ; que l'enseignement quotidien du professeur tende à détruire chez ses élèves les sots préjugés que certains journaux se plaisent à répandre parmi le peuple. Que l'on me permette ici de citer, à l'appui de mon assertion, le " Daily Gleaner," de Fredericton et le " World," de Toronto. Le 17 avril denier, le " Daily Gleaner" parlait de L'Expulsion des Acadiens en termes peu conformes à la vérité historique. Au cours de son article, l'écrivain du " Gleaner " laisse voir l'esprit fanatique qui l'anime et qui à un moment donné, éclate. Voici L'explosion dans la langue même du journaliste qui en est l'auteur :

" There is another important feature in the matter not to be overlooked. Had the Acadians remained in full force, they might have outnumbered the English and made Nova Scotia a French Province like Quebec. This would have been injurious to the welfare of a British colony and would have added to the inconveniences felt by the existence of the solid French of Quebec."

Ce qui veut dire en francais :

" Il y a un autre aspect de cette question qu'il ne faut pas perdre de vue. Si les Acadiens étaient restés en grand nombre, ils auraient pu l'emporter sur les anglais et faire de la Nouvelle-Ecosse une province francaise comme Québec. Ceci aurait été nuisible à la prospérité d'une colonie britannique et aurait augmenté les inconvénients qu'on éprouve par suite de l'existence de l'élément francais compact de la Province de Québec."

Passons au " World " de Toronto, qui au mois de mai dernier, sous le prétexte de signaler la constitution naissante de l'Australie, déclare que la nouvelle confédération vaut mieux que celle du Canada, parce qu'elle est libre de cette nuisance: L'Usage des deux Langues. (1)

(1) Voir "Le Temps," d'Ottawa, du 15 mai.

Je pourrais citer encore bien d'autres extravagances de langage qui ont cours presque quotidiennement dans quelques journaux de langue anglaise. Mais inutile d'accumuler ici des citations qui n'ont rien d'agréables pour des personnes réfléchies,

D'ailleurs, pour être juste, je m'empresse de déclarer que tous les journaux de langue anglaise ne sont pas animés de cet esprit étroit qui caractérise parfois les journaux cités il y a un instant. Non, quelques publications anglaises se font un devoir de prêcher les principes que j'ai l'honneur de préconiser devant vous, aujourd'hui, Mesdames et Messieurs. Ce que je viens de dire de quelques gazettes soucieuses de leur dignité et de l'immense responsabilité qui leur incombe, je puis aussi le proclamer avec bonheur de plusieurs politiciens d'Ontario. C'est ainsi que tout récemment, M. Robinson, député de West-Elgin aux Communes, prêchait l'union nationale, à la fête des orangistes, à St.-Thomas, le 12 de juillet dernier. Ce courageux député a défendu les Canadiens-francais et il s'est écrié bravement à la fin de son discours : "Nous savons que ce sont les francais du Bas-Canada qui ont conservé à l'Empire Britannique tout ce vaste Dominion, car si ces francais n'avaient pas été fidèles à ce pays, vous autres, orangistes qui m'écoutez, vous n'auriez pas ici assez de place pour vous tenir debout."

Voilà de nobles parole que je signale à tous ceux vui ne peuvent pardonner aux premiers pionniers du Canada d'avoir su conserver leur Religion, leur Langue et leurs Lois.

En mentionnant le "Daily Gleaner" et le "World," j'ai voulu tout simplement dénoncer le fanatisme dangereux qui détruit avec une persistance effrayante l'oeuvre patriotique que poursuit l' instituteur canadien. Je sais que ce fanatisme n'a pas cours dans les écoles canadiennes-anglaises. Non! Non! A l'école, il ne doit pas y avoir de place pour le fanatisme. Notre rôle à nous, éducateurs, c'est d'apprendre à la jeunesse confiée à nos soins que la justice et la charité chrétienne constituent seules le fonds d'un patriotisme solide et durable.

Formés de la sorte, les petits Canadiens, qu'ils se réclament de la belle France ou de la puissante Angleterre, sauront toujours respecter les droits de leurs concitoyens surtout lorsqu'il s'agit d'une minorité. Que nos efforts tendent vers ce but, chers confrères, et dans vingt-cinq ans d'ici, le peuple canadien sera le peuple le plus

(1) Pour les détails de cet incident voir "La Patrie" de Monréal, du 19 juillet 1901.

heureux de la terre. Chaque province tiendra à honneur de traiter la minorité, en matières scolaires surtout, avec justice et générosité; c'est ce qui a lieu dans la Province de Québec et tout le monde s'en trouve bien. Lorsque la justice et le droit règneront dans chacune des provinces de la Confédération, le drapeau canadien saura rallier sous ses plis glorieux tous les fils du Canada, sans distinction d'origine, qui chanteront avec enthousiasme aux grandes fêtes de la patrie : "O Canada ! mon pays, mes amours." Ce jour-là, mais pas avant, un sentiment national réellement canadien existera dans toutles province es de notre cher et beau Canada.

THIRD GENERAL MEETING,

AUGUST 16th, 8 p.m.

AN EDUCATIONAL BUREAU FOR THE DOMINION OF CANADA.

By Dr. J. M. Harper.

[Inspector of Superior Schools, Quebec.]

The age in which a right thing has readier acceptance than a wrong thing has either not reached us yet or has gone by; at least it would appear, from first sight, that the methods to be adopted to secure success in either case are identical. To present the claims of Canada to have an Educational Bureau of its own, has been my good fortune or evil fortune more than once; and, since the inauguration of the movement at the Halifax Conference of this Association, there has been enough said and done to indicate to Canadians what is meant by an Educational Bureau; at least it is not to be expected that at this meeting any one will misunderstand the project so far as to classify it with the many thriving Teachers' Employment Bureaus which seem to flourish on the other side of the line, and which have possibly taken not a few dollars from the pockets of some of those listening to me. The name Bureau is perhaps in itself somewhat unfortunate and others have been suggested, which are thought to bear upon the face of them some definition of the proposed organization. But even were one of these adopted, there would still be the prejudice to face which the Fathers of Confederation had to face,—the prejudice that there may possibly be in the movement an interference with the systems of education which have been established under the sole control of the several provinces of our Canadian confederacy of colonies. The purpose of my again appearing before you in behalf of this project at this representative gathering of educa-

tionists, is merely to state what has been done to educate our rulers to see in the proposal what many of us have seen it from the beginning,—a means of maturing the national spirit, and the assimilation of our provincial tendencies in the direction of a practical and actual unification of our educational Canadianisms. At the last meeting of this Association, a committee was appointed to take care of the movement, and when public opinion had been brought to bear upon the question through the press, with a gratifying *consensus* expressed on all sides that there was a good thing for Canada in the project, a deputation from the committee waited upon the Premier of the Dominion to find out what steps were likely to be taken by his government to organize such a Bureau as an adjunct of one of the governmental departments at Ottawa. Sir Wilfred Laurier listened attentively to the representations made by the Hon. G. W. Ross, Dr. MacCabe and the other members of the deputation, and promised to look into the whole question carefully; and should this Convention continue that committee, I have no doubt the various members of it will follow up their labours until further tangible results are realized, if not the fullest measure of success finally be secured. In this connection I may perhaps be allowed to suggest that arrangements be made by the said committee for a sub-committee of enquiry, whose duties may include a visit to Washington, where I am sure Dr. William Harris, the Commissioner, will give the members every facility to investigate the workings of the Bureau of Education in his charge. Indeed he has personally given me assurances to that effect, when I lately had the good fortune to meet him in New York. There is a movement, I may here say, in favour of organizing such a Bureau in the countries of Europe, more especially in the British Isles, and this is surely encouragement to us in Canada, to do what we can to mature our educational interests in the same direction.

Within these latter years the ambition has come to Canada to be of the first in the race among the younger nations which Great Britain prizes and protects as a mother's pride, and it behooves us, as sons and daughters of Canada, to turn our back upon no movement that professes to aid in the legitimate aggrandisement of our country. Indeed it is for me this evening again to lay before you the arguments in favour of introducing an element in our national policy which may help in rounding out symmetrically this legitimate aggrandisement, as a national unification.

A friend of mine, a public man, once fell into the habit of always advancing, in private hearing, every possible objection to any project he was called upon to share in,—not that he was one of those natural born human negatives whom we all dread, but in order that he might be fortified against these same human negatives when they buzzed around him in public. It is a dangerous habit to encourage, I need hardly say, even when the intentions are positive in their advocacy. The effects are too frequently subjectively bad, leading often to over-wariness, if not insincerity. In this case however, the plan may be adopted with impunity; since there has been advanced no valid objections to our project, unless what may have arisen from the general prejudice that stands as a lion in the way of every innovation. And we all know how short lived this natural conservatism is, when there is no logical or historical basis for its continuance.

With the *consensus* of public opinion in its favour, you will readily say, surely there ought to have been more done to further the movement towards its maturity. Yes, that is true, if the age in which a right thing has readier acceptance than a wrong thing had reached us,—if the method to secure the success of the right thing were not so identical with the methods to secure the wrong thing. I lately met a gentleman from Chicago who gave me an insight into what the teachers of that city call the "educational pull," that resembles very much in its details another kind of a "pull" which it would be highly impolitic to mention in your presence. An educational project may have many intrinsic merits of its own, but it has no more chance of being accepted by the educational authorities of that city, it is said, than has the worst devised scheme ever mooted. The method of advancing an interest is more than the interest itself. The advocate and his personal gifts are greater than the truth of his advocacy. *En bas* with your logic. What is your *pull?* And hence, as a distinguished educationist said at the Detroit meeting of the U. S. National Educational Association, the Chicago school system is in a fair way of becoming an *olla podrida* of everything that is good or bad in school management.

And what has been brought about in Chicago by the "educational pull," has in some measure fallen to us as a legacy from the framers of our constitution. "Each province may exclusively make laws in relation to Education" says the British North America Act; and thus, by a stroke of the pen, Canada has been, for ever cut off from

the prospect of having a Common National School. Indeed, as I have said before, no question tried the patience of the farmers of our constitution more than the school question. For a time there seemed to be no solution of the difficulty. A federal school system was an impossibility. The elimination of one of the strongest forces of nation building became a political exigency ; and the patriots of 1867 finally wiped their hands clear of the troublesome item of education altogether. The common school was thus left in the hands of the local legislatures, and as a provincial institution is sure to remain such as long as there is a confederacy. Practical politics has no place for the " national school " idea, and the reformer who is enthusiastic enough to raise the question will only have his labour for his pains.

But the constitution, which, as loyal Canadians, we are all ready enough to uphold,—not to mention the worry that has periodically arisen over " the school question " to the federal governments of the day, has developed in us a policy of suspicion with stands, not as a lion, but as a kind of dog-in-the-manger, in the way of bringing the federal parliament to look at any phase of educational advancement. To be candid, I think this is the reason why so little progress can be reported in connection with the organization of a Bureau of Education for the Dominion of Canada. I have done my best, as have my colleagues on the committee, and the press of Canada almost universally, to show that in the advocacy in favour of a Central Bureau of Education for Canada, there is not the faintest design of disturbing any of the provincial educational systems within our borders. Indeed the negative virtue of the whole movement is condensed in the one word *non-interference* ; yet that *bete noir* of the true progress still seems to stand in the way, and even such a suggestion as that made by Dr. Robins, will be difficult of realization, unless there comes an awakening to the public of Canada, that there is an educational enterprise in which the federal government can take part, without even the remotest attempt at interference with what the constitution of the country not only allows but protects.

The pressing necessity for such a sub-department in Ottawa is as obvious to all of us as its negative virtue of non-interference. You are nearly all by this time familiar with the functions which such an organization would have. If you are not, take up the last report of the Commissioner of the Educational Bureau at Washington

and read for yourselves, the marveleous co-ordination of educational views that may be brought about by having a Canadian Bureau of our own. In that volume the outsider and the insider can find a record of the year's educational progress through the length and breadth of the great republic and its nation of States, and who thinks for a moment that Dr. Harris with his staff of collaborateurs is an interference with the educational rights of any State in the union? And what Canadian is there who will say that it is unwise to let the teachers and the school commissioners and educational authorities of Nova Scotia know directly what the educational authorities of Ontario have been doing during the year, or that there is any interference of constutional rights in having a federal official appointed who shall tell ourselves and the outside world in minute detail what Canada is doing as a whole, educationally?

Indeed, as I have said elsewhere, it may be startling, but it is none the less true that Canada is the only civilized nation or quasi-nation in the world which cannot tell in co-ordinated detail the story of its annual educational movements. "The world," as one of our educational journals has pertinently put it, "can learn nothing of our educational status as a consolidating community from anything which the central government can tell." If it would know of us it must do its own collaboration.

And surely one would think, with the fear of interference completely allayed, such an argumeut as the above, would lead the federal government to take the necessary steps at once to organize the necessary sub-department. We have our sub-departments of Statistics, of the Archives, of the Indian Schools, etc., etc., and why there should be any delay in the organizing of a sub-department on Education is something which we may all try to explain in our own way, without being able to divine the proper explanation. I have thought to explain the seeming disinclination to take the initiative, by referring to the age that has not yet reached us, in which a right thing is to have readier acceptance than a wrong thing; but that is not much of an explanation. The logic of the right cannot be overlooked for long, as the true statesmanship is ever telling us; and the ignoring of it is ever but a poor policy. The sympathies which have been aroused and fostered by the organizing of a general educational association for the whole country are surely to be found along the " of the logic of the right; and the provincialism that lurks in

some nook or corner of its own *isms*, only to show itself resistingly when our outer national environment is being improved, may as well object to a Dominion Educational Association as to an Educational Bureau for the Dominion.

With such a general re-statement of the case, I may safely leave the whole question in the hands of the committee who has it in its keeping the progress of the movement. I may be allowed perhaps before the sessions are over to frame a resolution which, if accepted, may tend to strengthen their hands in again approaching the federal government on this question. Meantime for the sake of those who have not had an opportunity of knowing what the functions of such a Bureau are in detail, I may here be permitted to give them as they have already been given elsewhere.

1. Such a Bureau would prove a potent means for improving, vitalizing, and co-ordinating the various school systems in the Dominion, and bring about an interblending of educational influences that would lead us nearer to being one country, one people.

2. Such a Bureau would have the definite function of collecting all documents referring to educational developments in any part of Canada, and the preparation of historical memoranda connected therewith.

3. Such a Bureau would supervise the issuing of an annual report, containing a comparative statement of the school statistics of the various provinces, and referring to the prominent educational movements in the various sections of the country.

4. Such a sub-department would also be expected to supervise the preparation of a compend of the great educational movements in other countries, and offer suggestions as to the adoption of the best means or measures based upon the experiments made in these countries.

5. By judicious steps such a department would also see to the diffusion among the people of all the provinces information respecting the school laws of the different provinces, the classes of school officers and their respective duties; the various modes of providing and disbursing school funds; the qualifications of teachers and the best modes of training and examining such; the most improved methods of imparting instruction as well as of organizing, classifying and grading schools; the collecting of plans for the building of com-

modious and well ventilated school houses; and the taking cognizance of any educational activity that might lead to a better insight into school work in all its phrases.

6. Besides being an agency for the diffusion of correct ideas respecting the value of education as a quickener of a national intellectual activity, such a Bureau would have suggestions to make in regard to the educational processes to be adopted to secure the higher industrial effects in science and art, without which there can be no full advancement or permanency in the manufacturing industries of a country.

7. Through the influence of the Minister under whose supervision such a sub-department might be placed, and from the public utterances at conventions and educational gatherings of the officers who have its affairs immediately under their control, such a Bureau would tend to promote a wholesome and general knowledge of education as a subject intimately mixed up with the industrial, intellectual, and moral advancement of the whole people.

Reply of Hon. P. Boucher de La Bruère.

I am sorry to see that the idea of asking the Dominion Government to establish a Bureau of Education in Ottawa—which was expressed at the Halifax Convention three years ago—has again come up and that fresh attempts are made to have it adopted.

The originators of this idea have, ever since 1897, endeavoured to get the press and the Convention of Protestant Teachers of the Province of Quebec to share their opinion. Strictly speaking they have the right to do so ; they must nevertheless be aware that in seeking to press their views they are antagonistic on this point to the ideas of the majority of the inhabitants of the Province of Quebec and they would, to a greater extent perhaps than they imagine, wound the feelings of those who are anxious to control their own schools and who are in nowise desirous of having the Federal power intervene in educational matters beyond the limits laid down by the Constitution of the Country.

In opposing the proposed establishment of a Bureau of Education at Ottawa under the direction of the Central Government, I expressed not only my own personal opinion but also that of the Catholic Commlttee of the Council of Public Instruction of my Province.

At its sitting in the month of May, 1899, that distinguished body, composed of all the Bishops of the Province and of prominent laymen, being called upon to state its views with regard to the advisability of this measure, unanimously adopted the following resolution on the motion of Honorable Mr. Justice Langelier seconded by Monseigneur Laflamme, a former rector of Laval University.

"That this Committee, after taking communication at the Superintendent's request of the memorial which the Executive Committee of the Dominion Educational Association wish to present to the Prime Minister of Canada, asking him to establish a Bureau of Education under the control of the Federal Government, are of opinion that the establishment of such a federal department is neither constitutional nor desirable."

There is no ambiguity in the above resolution and there can be no misconception with regard to the opinion so clearly expressed by the Committee of the Council of Public Instruction which, in our Province, represents the great majority of the population.

As regards the Protestant Committee, I may say that it has not expressed its views on the matter.

It is evident that this idea of a Central Bureau of Education has been taken from the United States. In fact it is American and not Canadian. There is no concealment about this. In November 1898 I read in a Montreal newspaper the following which Dr. Harper will admit correctly sets forth his views :

"The Bureau of Education or education office at Washington owes its existence to a law passed on the 2nd March, 1867. It is a branch of the Department of the Interior. The head of the office is called the Commissioner of Education and his function is to collect statistics and facts showing the condition and progress of education in the several states and territories and to diffuse such information respecting the organization and management of schools and school systems and methods of teaching as shall aid the people of the United States in the establishment and maintenance of efficient school systems and otherwise promote the cause of education through the country."

Now if we look into the principles that govern the republic of the United States and those that govern Canada it is evident that there are marked differences.

Our system of government is a federation of Provinces whose attributes or powers differ from those of the States of the American Union. So that what may suit one country may not suit the other and it may also perhaps not be in the general interest of Canada or even of the British Empire to imitate our neighbours in everything or to seek to assimilate our institutions to theirs.

Washington's idea was to establish a university in the centre of the nation in which all heterogeneous elements would be fused to give a single direction to the minds of all in order that a national American spirit might result. He was supported by Pinckney of South Carolina and by James Madison of Virginia.

At the time of the constitutional meeting held in Philadelphia in 1797, the proposed constitution as drafted by Pinckney, stated that Congress should have power to establish a national university at the seat of government. The Committee rejected the project and Governor Morris, in replying to Pinckney, said that the motion was unnecessary as Congress already by formal enactment possessed the right to pass regulations or laws in connection with national education.

These attempts to centralize education show that the founder of the republic and those of his friends who shared his opinion wished to establish a high standard of education and by training special professors to prepare future generations for federal life outside of the interests of individual states.

These attempts made at the outset of the republic and since renewed were unsuccessful and, even at the dawn of this century, it may be said that federal influence has not as yet deeply permeated the mind of the nation. Nevertheless the National Education Association to which the federal officer, the Commissioner of Education belongs, is endeavouring to bring opinions into line and, according to some writers, the dominant spirit is inclining more and more towards centralization with a manifest tendency to have the central power intervene.

It seems to me—and I do not think I am wrong in saying it—that these are the principles which it is sought to introduce into

Canada by endeavouring to have a Bureau or Department of Education established at the seat of the Federal Government although no provision is made for it by the constitution.

The want of statistics is alleged in support of the proposed change. If this be the sole object there is no need to establish a Bureau of Education. We have merely to refer to Chapter 59 of the Revised Statutes of Canada to see that the Federal Government has power to obtain all the statistics it may deem requisite. The Minister of Agriculture may establish rules to that effect. Even if in any one of the Provinces of the Confederation there happen to be any method of obtaining vital, agricultural, commercial, criminal or other statistics, the Governor in Council may make arrangements with the Lieutenant-Governor of such Province or Territory or even with the organization in possession of the system, for collecting and transmitting the information asked for. This provision is contained in section 4 of the act.

I repeat that if the sole object of the proposition submitted to your consideration be to collect information in educational matters, the existing federal law is sufficient to allow of the Minister of Agriculture obtaining them without the necessity of increased expenditure of public money through the establishment of a special department and the appointment of a High Commissioner of Public Instruction. The Provinces have never refused to send their statistics to the Federal Government and, if need be, the latter may make arrangements with the local authorities as enacted by the act I have just cited.

But it is intended to go still further and it is the idea of centralization advanced by the authors of the proposition that I oppose, constitution in hand and with the valuable support of the members of the Council of Public Instruction of the Province which I represent.

Now what can be the second, and probably the chief motive of the partisians of the measure? I find it in the first place in the statement of the newspapers favourable to the movement.

Just now I mentioned the object attributed to the Bureau of Education in Washington. One of the reasons was: "to diffuse such information respecting the organization and management of schools and school systems and methods of teaching as shall aid the people of the United States in the establishment and maintenance of efficient school systems and otherwise promote the cause of education throughout the country."

The newspapers from which I quote also speaks of the Commissioner of Education and refers to him as the Statistician and Counsellor-General to the nation in all questions of public instruction.

It adds: "There is no possible phase of education, elementary, superior, university, industrial, medical, legal, sanitary and special of every variety, in operation or contemplated in the United States that does not come within the purview of the Commissioner's enquiry."

I find the same reason set forth in a paper read in October, 1899, before the Convention of Protestant teachers of the Province of Quebec.

The author sees in the Confederation of Canada naught but a petty commonwealth of Provinces without any solid bond to unite them, without the spirit of union needed to make them a real nation and consequently without national spirit. The remedy, the great remedy for this would to be to establish truly national schools, cast in the same mould and the fusing of which would doubtless have the effect of removing all differences of race and religion, constituting but one compact and homogeneous whole. It is to be presumed that each school would, in the school municipality, play to a certain extent, the role that would have been played by the national university suggested by Washington. And to crown this unique type of a school it would, as may well be imagined, be necessary to have a Bureau of Education in Ottawa. To prove this school system the author adds that there should be no hesitation even to look to the Federal Executive for amelioration. The author of the paper, who is no other than our friend Dr. Harper, went even further. He allows us to see his preference for legislative union of the Provinces and the destruction of the federal compact of 1867. His pen has written the word "revolution," whence, as a rose from its bud, would spring the school of his dream: "The Constitution gives us, by the British North America Act, he says, has in it the elements of nation building; but there is in these elements no bottom on which to build a national school. The national school must come with a revolution."

Nevertheless the revolution which Dr. Harper indicates as a remedy for the present condition of the Confederation seems somewhat remote, even in his opinion, and he consoles himself in advance by saying in his paper: "But we can at least have the connecting

link in educational affairs which they have in the United States. We can have a central advisory sub-department at Ottawa which, without any direct administrative function, shall be the exponent of the nation."

This is precisely what we do not want in the Province of Quebec and we would not stand alone, I think, in refusing to receive from a Federal Commissioner such opinions as he might choose to give or the remonstrances he might take upon himself to express with regard to the manner in which the Provincial Government might act.

Every one knows that, under the Constitution of the country, education is under the exclusive control of the Provinces. Now in virtue of what principle could the Ottawa parliament pass a law enabling it to have what Dr. Harper calls a central advisory sub-department? What power would the Federal Government have to appoint a Commissioner of Education who would act at the same time as a Statistician and as a Councillor-General to the nation in matters concerning public instruction?

To my mind this would be a violation of the spirit and letter of the Constitution of 1867 and an infringement of the autonomy of the Provinces.

The grave difficulties in connection with the Manitoba schools are still fresh in our memory. If, in spite of the British North America Act, in spite of the judgment of the highest court in England which recognized the right of the Federal Government to intervene in order to do justice to the minority, the Manitoba Government refused to submit, how can we believe that the Executive Council of the Dominion would be successful in organizing an efficient Education Department when there is nothing in the Constitution to show that it has the right to do so?

I understand that every individual may have his preferences; that he may conceive an idea of what the country or its school system should be. Still if we consider what is going on amongst our neighbours, we find that both methods and programmes vary in the different States. I might even venture to say that decentralization is absolute and that it does not appear that the Bureau of Educations. given us as a pattern, has succeeded in establishing scholastic uniformity.

Can we believe that it would be otherwise in Canada ? Could the Commissioner-General to be appointed—whatever his ability—have authority to dictate, for instance, what he might consider to be the best teaching in the law-schools when the laws of the different Provinces vary and in the Province of Quebec, in particular, French law prevails.

There is likewise a marked difference between Roman Catholic and Protestant teaching. Compare the Protestant High School with the Catholic Classical Colleges. Would it be possible for the Chief Commissioner or for the Federal Education Department to define the methods of such educational establishments in order to assimilate them to one another and to make them uniform ?

In a matter of so complicated a nature we must necessarily take into account the character, tendencies, aspirations and needs of the races dwelling in the Dominion, a point which does not seem to be borne in mind. Is a fusion of all the elements making up the Dominion desired? For whose benefit would it be effected ? This is a rather difficult problem to solve. I may say that the French element has no idea of absorbing the English element ; what it desires is to live in harmony with all and to enjoy the political and religious liberties granted it by England. Confederation was enacted to cement these liberties and every attempt made under any pretext whatsoever to bring about legislative union is looked upon by the people of the Province of Quebec as an encroachment upon the rights and privileges it enjoys. We do justice to the religious minority in our Province by granting it even more than its share of the public moneys, and in the Dominion, where we are in the minority, we have reason to hope that the majority will have the same consideration for us.

At this moment a question arises in my mind. Who would this Chief Commissioner of Education be ? Owing to the excellence and high degree of the literary and philosophical education given in the French Canadian Classical Colleges, we, in the Province of Quebec, might, with some chance of success, claim that the head of the new Department should be a French Canadian. Do those who are in favour of a Federal Bureau of Education think that this Commissioner, this exponent of the nation, as he has been called—whose mind has been formed in a different mould from that of his Anglo-Saxon fellow-citizen, who has his own standard for appreciating school systems—could really live up to his title of exponent and on

educational matters express opinions that would satisfy everybody without giving rise to recrimination in some Provinces? Could the Commissioner do better were he of English origin instead of a French Canadian! I do not think so.

The real exponent of the Provinces is the Council of Public Instruction which, composed as it is of competent men, is in my opinion much better fitted to decide school questions that a Counsellor-General would be, because it is fully cognizant of local needs while having a just and intelligent comprehension of what the national sentiment of the country should be.

Dr. Harper wants a Central Advisory Sub-Department in Ottawa. I take the liberty of telling him that, for my part, I would have less confidence in such a Federal Committee in matters concerning the Protestant schools of Quebec than in the Protestant Committee of the Council of Public Instruction.

At the beginning of the present year the Imperial Government published in several volumes—which you must have seen, gentlemen, very interesting and very complete documents respecting the school systems of the principal British colonies. I may add that in order to obtain this information, the Secretary for the Colonies did not deem it necessary to ask for the establishment of a Bureau of Education in London the chief whereof would be recognized as the exponent of the various colonies.

If the Ottawa Government desired to publish similar reports why should it be asked to organize an Advisory Board to point out to the various Provinces of the Dominion the school system that it might deem suitable to them?

In England they know how to govern and the English Cabinet acts wisely in leaving to each colony the responsibility of its own administration.

I therefore conclude that the Dominion Educational Association would be wrong in deciding to apply to the Federal Government for the establishment of a Department of Education against which such strong objections exist both from the standpoint of the particular interests of the Provinces and from that of the Constitution by which we are governed.

Let us discuss educational matters at our meetings but let us not be imprudent enough to solicit the intervention of a power from whose control the school organization of the Provinces has been taken with full knowledge of the subject.

We shall none the less be good Canadians and in each Province we will vie in zeal to increase the efficiency of our schools, to properly train teachers and to give our children an education commensurate with the needs of the country and the glorious destinies awaiting it.

Professor Robertson, Commissioner of Agriculture.

Mr. President, Ladies and Gentlemen,—I desire to thank you for the honour of an invitation to address the convention of the Dominion Educational Association. In expressing my thanks, I must beg your indulgence while I speak of something which may be attempted towards the improvement of rural schools in Canada. The eloquence and fervor of those who have addressed the convention to-night and at previous sessions have been such as to nourish national sentiment or the sentiment which finds its expression in patriotic displays in connection with national movements. National life of a worthy sort for us rests on the labours of teachers; and whatever helps to make them effective, strengthens the national life. Any national greatness, which we may have or attain to, must come from an intelligent, God-fearing and capable population. To ensure these qualities in our people, it will be admitted by every one, that in the rural schools we need the best education.

The Dominion Educational Association.

I take it that this organization, like all other organizations, comes from the life and activity of the individual members who compose it; and that as an organization, it is meant for real use, that is to bring something to pass, besides the passing of resolutions. At a convention of teachers, one may look for a frank and unhesitating intellectual hospitality. More even than other people with open minds, those engaged in educational work should have no prejudice against information, or suggestions, even if these should come from

unexpected quarters. I have observed in the discussions that teachers are fearless and even lavish in their criticisms of the educational systems in the various provinces from which they hail. They speak with a vehemence of adjectives which I would not venture to imitate. Such words of a descriptive sort as "vicious," "pernicious," "preposterous," are tossed about with a freedom from responsibility which I would not dare claim. However, out of the information, the suggestions and the criticisms should come some inspiration to be directed into definite practical action after these meetings are over.

An organization or convention which does not do anything except make or listen to speeches, pass or record resolutions, makes but little use of the intellectual amunition of those who take part in its discussions. My own contribution to the proceedings will have value only in so far as it leads to practical action afterwards.

The Manual Training Movement.

My name has been connected with Manual Training in the public schools since I have the honour to administer the Macdonald Manual Training Fund for Canada.

It is rather unfortunate that this reform in the methods of education should have come to us under the name of "Manual Training." There are in this newer education three forms of expression which are used interchangeably. I am sorry for that; it leads to much confusion. The three are: Manual Training, Industrial Education, Technical Education. I see them in the newspapers, read them everywhere, and hear people talking about them; and the one means the other to most people. Now, they are not the same thing at all—not at all the same sort of thing. The spirit of the thing determines its nature. The spirit is quite different in those things I have named.

Manual Training is that part of general education which seeks its result in the boy himself or in the girl herself, seeks the result there and nowhere else, without regard to the particular occupation to be followed afterwards. The things made by a child in Manual Training may as well go into the stove or into the waste-paper basket; but the things made by a boy in an industrial school, under a system of Industrial Education, are made for the sake of the

things and made for the sake of the ability to make the same or similar things that will sell. I do not say that is a poor part or an unnecessary part of education, but it is not Manual Training.

Industrial education imparts information and gives training for the particular purpose of fitting a boy or girl, or man or woman, to be capable, expert and skilful in some industrial occupation.

Technical Education has some manual training in it, but the manual training in technical education has a price in it and on it for the worth of its products. It is looking to the effect of the training on the craft and on the product, and not on the person. Technical Education is to prepare a boy or girl, or man or woman, for following successfully a trade or profession. Manual Training in a technical school is pursued as an end in itself; the idea behind it is utilitarian only. There is a difference--a tremendous difference—and Manual Training is not so valuable after a boy is past fifteen. It then becomes technical education and craftsmanship, which have their value in dollars and cents, but which are not essential as part of an elementary school system. On the other hand, Manual Training is a means for developing the faculties and giving the boy that all-round training which he is entitled to in a country like ours.

Any attempt to impart a purely utilitarian character to the education of young children is bound to defeat its own object. A child is one and indivisible. After reading books on the subject one is almost persuaded that a child is not one—that a child is like the wooden puzzle we used to have as boys. You pulled out one peg, and that was one part; you continued, and laid all the parts in separate places. After a while you tried to put them together, and when it was finished it was a man. So we speak of the body, and we have gymnastics for the body; we speak of the mind, and we have intellectual training for the mind; we have the emotions, and we have music and all such nice things for the emotions; and then we have the will, and we make a boy do disagreeable things, and refrain from doing pleasant things, to train his will. The disagreeable has been counted a necessary element in mental and moral training of high discipline. That is my old wooden puzzle over again; you take the boy all apart and scatter him about, and then try to put him together again—and you find that you haven't the boy. The boy is not that sort of thing; the division is not real, and the making of the divisions for clearness of explanation, is at too great a cost.

EDUCATION IN RURAL DISTRICTS.

The improvement of the rural schools is one of the important public questions in Canada to-day. In our educational progress not much has been done for the boys and girls in rural schools compared with what has been given to and made possible for the children in towns and cities.

The after-life of the boy who leaves the country school, to follow some occupation in the locality, does not readily join itself to the school life which he then leaves behind. In nearly every case the school life has been an experience apart from, diffierent from, and only in a very remote way leading up to, the mental or bodily labours and social duties which are to occupy him afterwards. It becomes necessary, since the school house absorbs so much of the time of the boys and girls, to adapt rural schools to rural life.

In educational Manual Training the advance has been one from books to benches as a means of mental culture. In rural schools the advance should be from books to benches, and from both to plots of ground and various objects, as a means of mental culture. This sort of thing is being carried on most successfully, particularly in the schools of Nova Scotia and those of the North West Territories. A piece of ground attached to a rural school should be utilized, each child having his own small plot, which he can use like his slate, putting things in it and on it, and and rubbing them off again—not for the sake of the things, but for the sake of the child's growth in knowledge and mental ability. I hope that ere long we shall have many schools in Canada, where boys and girls will have an opportunity of getting this better sort of education. For instance, suppose a boy should plant ten grains of wheat in a row, ten grains of Indian corn in another row, ten sets of potatoes in another row, and ten clover plants in another row. Suppose, further, that he should pull up one of these plants every week, and find out for himself, under the guidance of a competent teacher, all that had happened in the meantime. Suppose, further, that as far as he was able he should make drawings of the plants and a written statement of the progress of growth as he was able to observe it from week to week, would not such a course for ten weeks, occupying only half a day per week, give an intelligent boy or girl not only a great amount of exceedingly useful information, but also habits of investi-

gation, observation, comparison and thoughtfulness, which are so desirable?

In this matter, as in Manual Training, the course of studies and exercises should be graduated to the abilities of the children. Such courses have been followed with great success for many years in European countries, and of late years they have become part of the school system in some places of our own country, under the name of Nature Studies. Perhaps what is needed most is the help of experienced teachers, who know the true educational plan to put below such work and study by the children, that it might not degenerate into only a means of giving them a mass of scrappy and disconnected information about a great number of things. Books do that well enough, or badly enough, now. The purpose below this newer method should be to train the faculties of the children in natural ways, and to make the objects, the exercises, and the information acquired, all strictly serviceable to that end.

The difficulties which have hindered progress in the past are said to have been: Want of money, the fact that the time table was already too full, and the fact that teachers are not properly qualified to take up fully these better methods.

Reforms of a permanent sort must necessarily be brought about little by little. The teacher and the school trustees, without substantial outside help at the beginning, can go only a little further than they are followed and supported by local opinion.

About Subjects and Methods.

In considering the subjects which should be to the very front in the school course, one is warranted in saying that those which deal with nature should come first, and perhaps those which deal with human nature should follow. It seems to me that a great deal of nonsense has been talked about the cultural value of the subjects, which have been grouped under the name of Humanities, for children in the elementary schools. In the elementary schools, the children are very much children, and it is obvious that their faculties can be called out into activity, and trained better, on what they can see and handle and even make for themselves, than on subjects more or less (and usually a great deal more) theoretical.

The matter of all subjects should itself be suggestive and not artificial. It should certainly be full of purpose for the awakening and sustaining of the interest of the child and the training of his mind.

If one may mention a method which would seem to include the best, it would be that of tracing results back to their causes until that habit of mind is formed in the children. In Nature Studies, those who have experience say that the beginning should be made with what is solid and obviously practical, and that then the child should proceed to book lessons when his own observation is exhausted.

It will certainly be of great benefit to the children at any rural school if a school garden containing plots for every child above the age of eight or nine years could be provided. These gardens could be used, as they are at a few schools in England and as they are in many schools on the continent of Europe, for the training of children to habits of close observation, of thoughtfulness, of reflection and of carefulness.

It is certainly most desirable to cultivate in the child a love of labour, of even the sort of labour by which the child is to live, in order that he may be trained to ability therein. It is most desirable to cultivate a love of study, and to incline the children towards becoming lovers of ideas as well as lovers of labour.

To start and nourish ideas the teachers use methods, processes and devices. Children get ideas and ideals far better from things and from life than from symbols and words and books. We have six avenues for taking in impressions before we are educated ; after that, we have many more. We have six to start with : tasting, smelling, hearing, seeing, feeling and the sense of temperature,—that even a baby has. Those are six avenues for impressions. Now, if an impression reaches a boy's consciousness by all these channels at one time, don't you think he has the impression a good deal more clearly and distinctly and lastingly than if it came to him by only one of them ?

When a child does anything with its own hands, such as planting a seed, pulling up a plant, making examination of the changes which have taken place during its growth, making a drawing of it, mounting it and putting its name on it, he receives impressions by the sense of touch, he sees, he hears the noise of the movements he

makes, and he smells the soil and the part of the plant with which he is dealing. Do you not remember the smell of the woods and fields in Spring, and the lingering odour of the leaves in Autumn; and do they not bring back to you every voice and every sound, every bird and every twig that contributed to your impressions at the time?

Six avenues for impressions and only two avenues for expression —the tongue and the hands; a little in the countenance when you are angry or pleased, but otherwise the two avenues, the tongue to say and the hands to do things. Now, if we get clean-cut impressions along all those lines of sense, we ought to give them a chance of getting out as expressions by both lines, and not only by one line. We ought to do that for the sake of the ideas, and for the sake of the boys. Both may thus be of use and benefit to each other—the ideas and the children. Children would become lovers of ideas, and ideas would nourish their minds.

Some Suggestions for Advance.

No doubt teachers in Canada would be willing to qualify themselves for this better sort of work in schools, if an opportunity were provided. It seems desirable and practicable to give such teachers the opportunity which they need.

I would suggest four ways in which beginnings towards improvement in the right direction might be made. Might not a group of ten rural schools in some locality be chosen in which to give an object lesson or illustration of this better education to which I have been alluding? If a competent travelling instructor were engaged, who would spend half a day of every week at each of these ten schools, would he not soon be able to train teachers and children into these better methods of nature study and give practical illustration of training these faculties of the children which too often are altogether neglected? In some other locality could not a group of five schools be arranged under the care of one travelling instructor, who would be a specialist in nature study and nature knowledge as well as a good teacher in the subjects which have been common in the schools in the past? Such a travelling instructor could then visit each of these five schools two half days per week and give the teachers and children together lessons in the school garden, and

other object lessons, which would train their observation, quicken their intelligence and lead them to have desire and capacity for living happily amid rural surroundings.

Another way in which I would suggest progress would be to start evening continuation classes in the rural districts. These would provide the true solution for education in agriculture of youths in the country at the ages from fourteen to eighteen. One or two central schools of each of these groups might be chosen for evening continuation classes. At these, what the young lad working on the farm saw during the day with his uninstructed eye, could be explained to him in such a way as to awaken a new interest in his work and greatly increase his ability for enjoying it and carrying it on well.

Moreover, in some districts, the area for the rural school is so small that the need of funds and the isolation of school authorities from contact with others, cause them to let educational matters drift into still greater weakness and helplessness. If in some district an object lesson could be given of the consolidation of five or six rural schools and of the establishment of one well appointed and well sustained central school instead of five or six weak ones, that might lead to a general improvement in that direction. In some of the United States the consolidation of rural schools has already been carried out to a considerable extent, and in most cases with a very great gain in the quality of the education given in the locality and with no increase of cost to the ratepayers. It has not been difficult to arrange routes for the collecting of milk or cream to one central place; it would not be more dfficult to arrange for the collection of children on various routes to one central school, and certainly the children of a neighbourhood are worth the best care and thought and spending of anything in the locality.

To make possible such work as I have hinted at and to let it be capable of anything like general adoption and extension, there is need for further preparation of the teachers. At several places in England this year, short courses have been provided for periods of only three weeks, with the expectation of doing a good deal towards qualifying teachers to carry on their work in a better way. In Canada it might be possible to arrange for courses of training for say twenty-five teachers at one place, each course to last for two months. During this course the teachers should carry on nature

study as they expected the children to do it at the school afterwards. A plant house is not so costly for construction and maintenance that this would be a very difficult accomodation to have for the winter and spring months.

RECOMMENDING AND SUPPOSING.

I recommend these four matters to your most sympathetic consideration: (1) the possibility of giving an illustration of the best method of carrying on educational work in rural schools in groups of five or ten schools; (2) the carrying on of evening continuation classes for boys and girls of from fourteen or fifteen to eighteen years of age; (3) the consolidation of rural schools in one or two districts; and (4) the establishment of training schools for teachers, at one or more places. These would all be in a measure experimental. I think they would serve for education a purpose somewhat similar to that which illustration stations, dairy stations and experimental farms have served for agriculture in Canada.

Now, *supposing* a committee of this Association should be appointed to take these matters into consideration, do you not think that such a committee could bring something to pass and have an amount of exceedingly valuable information to present to the convention of this Association to be held two years hence. *Supposing*, but you may say, what is the use of *supposing* when the want of funds and the want of time put the matter beyond the ability of the Association or its members? Mr. President, I have a great regard for the habit of *supposing*. Let me give you an illustration. One night with my feet on the fender, I sat musing and *supposing* what would happen if a thousand boys on Canadian farms could be led to take up the systematic study of the selection of seed grain, if they would each grow a special plot on their father's farm and discover for themselves what improvement would result by systematic and continued selection for several years. *Supposing* that were possible, what a great gain to the agriculture of the Dominion and to the intellectual life of the people on farms would result. *Supposing* ten thousand dollars should become available in the shape of prizes to encourage these boys to take up this work; *supposing* that could be done, what then? Well, the illustration of *supposing* I have given you, led to the sum of ten thousand dollars being put in the Bank of Montreal by Sir William C. Macdonald to do the very thing which I began *supposing* might be done, and which if done would be of great benefit to the people of Canada.

Now let me go back again to the matter of the committee of this Dominion Educational Association. *Supposing* a committee should be appointed to take up the matter of the improvement of rural schools; and *supposing* the committee out of its collective wisdom decided that suggestions such as I have made, or others better than them, should be attempted in the way of object lessons, illustrations or experiments, in educational matters; and *supposing* further that such a committee would undertake to supervise these object lessons, illustrations and experiments, if the money actually needed were provided; do you not *suppose* that such a committee would do exceedingly valuable work in Canada? Now, Mr. President, if I may drop the *supposing*, I think I am able to say that if this Association appoints such a committee I know where the funds for such work could likely be obtained to enable the committee to render such a great service to the Dominion of Canada as only trained, experienced, capable and unselfish educators could render to it, when assisted by sufficient money provided by one or more of the generous friends of education in our Dominion.

Such a committee could approach the Departments of Education in the various provinces with suggestions and recommendations and offers of co-operation, which would doubtless be welcomed. Their knowledge, zeal and enthusiam could carry forward educational work in wise ways with due regard to the varied and manifold needs of the people of Canada. I am sure that out of such efforts might grow what would be of the greatest possible benefit to this country; and I am confident that one of my friends will make good whatever I have intimated to the Association in my supposing, if such a committee is appointed and takes up the matter of the improvement of of rural schools.

ELEMENTARY.

Minutes of the Elementary Section.

Through a misunderstanding the Elementary Section of the Dominion Educational Association did not hold any session on Wednesday Aug. 14.

THURSDAY, A.M.

Principal Marshall, of Halifax, read a paper entitled :—"What the Teacher can do for the Farmer."

"Drawing in the Public Schools" was the subject of a paper read by Mr. J. A. Dobbie, of the Ottawa Normal School. Discussed by Messrs. G. M. Ritchie, Principal Masten, John Brittain, Ernest Smith and Principal Meldrum.

Principal Ernest Smith, Westmount, Que., contributed a paper entitled :—"The School as a Preparation for Practical Life." He contributed many valuable thoughts and suggested many principles to render education practical.

Principal Meldrum of Morrisburg gave a paper entitled :—"English Grammar as a Culture Subject." The principal points of the paper were discussed by Principal Robins, Jas Denny and Mr. John Brittain.

FRIDAY, AUGUST 16TH, A. M.

Principal Robins of McGill Normal School read a paper entitled : "Comparison of the Common School Curricula of the various Provinces." This paper was discussed by Messrs Masten, Attwood, Ross, Ritchie, S. F. Robins and others.

"Manual Training" was the subject of a paper read by Principal T. B. Kidner, Macdonald Training School, Truro, N.S. Discussion on this paper was entered into by Miss Robins, Messrs A. H. Leake and L. H. Bennett, and Dr. Robins.

The following officers were elected for this section :—

President.....E. D. Parlow, Esq., Ottawa.
Vice-President.....Ernest Smith, Esq., Westmount, Que.
Secretary.....G. M. Ritchie, Esq., Toronto.

P. M.

Dr. Goggin read a paper, prepared by Principal W. A. McIntyre of Winnipeg, entitled : "Independent Individual Effort," or "The Upbuilding of Character."

Mr. John Brittain of Fredericton, N.B., read a paper descriptive of the School System of New Brunswick.

An outline of Educational Matters in the Province of Quebec was given by Mr. G. W. Parmelee, B.A.

A paper on "Education in Nova Scotia," sent in by Inspector Creighton of Halifax, was then considered.

Dr. Goggin outlined the progress of Education in the North-West Territories.

Moved by Mr. G. M. Ritchie, seconded by Mr. Jas. Denny that a vote of thanks be tendered to those who have contributed papers. Carried.

Meeting adjourned at 4 p.m.

WHAT THE TEACHER CAN DO FOR THE FARMER.

By G. R. Marshall, Halifax, N.S.

At no time in the world's history has there been such intense industrial and commercial activity as there is now. In nearly every part of the habitable globe, the warehouse with its bales of merchandise may be seen, and busy traders striving with each other for a monopoly of the markets. Nor is it the strife between local traders only. Cheap and rapid means of transportation have made all nations neighbours and it frequently happens that articles are consumed in the antipodes of the country in which they were produced. By the use of cold storage even the New Zealander and the Canadian are able to compete with the European in the fruit market of London.

The greatness of a nation is not now measured by its power to conquer, but by its power to produce, and the boast of a people is in the extent of their trade. The mighty men of the land are no longer the orators and the philosophers but the millionaires. They are the pride of the nation, the ideals of the young, and the hope of the parents is not that their boy may grow up to be a leader in thought but in business. The general demand of the time, from parent and people at home and abroad, is for business men, men capable of successfully managing stock companies with any amount of capital.

The ideal products of the school have not been business men, but professional men, and a study that tended to fit a man to earn a livelihood was rather looked upon with disfavor. The public complained that college graduates who did not enter the learned professions, were not, after four years of study, better prepared to earn their living than their more studied companions who had spent less time at their books.

To meet a demand from younger men for a college training, and at the same time a preparation for the business they were to enter after leaving the schools, in many universities new curricula of

study were arranged, and now the man who expects to become an engineer may pursue a course prepared especially for engineers, and the man who expects to become a farmer, may pursue a course prepared especially for farmers, and so on for an almost unlimited number of occupations.

Instruction is not given in theory only but workrooms have been equipped so that the student may prepare his muscles as well as his mind for the business that he is to undertake.

These arrangements in the universities have proven so satisfactory that the course of study in the high schools is being modified. The sub-divisions are not very numerous at the present time, but changes are being made year after year, and we know not what the end will be. The natural sciences, drawing and bookkeeping are receiving a more prominent place than formerly, because of their direct bearing upon so many lines of work, and agriculture and stenography are being recognized as worthy of a place on the list.

It has been found easier to introduce studies in theory, than in practice, because of the expense connected with fitting up suitable rooms in which the pupils might work. The practical part has been found so valuable however, that the most progressive school boards are making an effort to provide suitable accommodations for teaching it. The fact that Sir William McDonald assisted by Prof. Robertson is with such commendable generosity establishing a Manual Training school in each of the Provinces of the Dominion, is a sufficient evidence of the high opinion they have of this kind of training.

The difficulties connected with teaching practical agriculture are so numerous that it is not generally attempted in connection with high schools. There is expense of purchasing a suitable field and providing buildings, tools, fertilizers, instructors, etc. As the work has to be done out of doors, there is the difficulty of arranging regular hours for classes. Again, the best time for teaching farming is during the summer ; but at this time the schools are closed.

In Nova Scotia an effort is being made to have small gardens cultivated in connection with the schools. This is for the purpose of interesting the pupils in the subject rather than for the value of the Manual Training they will receive.

Several teachers have gardens of their own to which they occasionally take their pupils, and explain what is being done. This reminds one of the old method of teaching chemistry when the teacher performed all the experiments and told his class what he did. There is this difference, however. Not many pupils have the chemicals or the apparatus to enable them to conduct the experiments in chemistry for themselves, but every child can find soil enough to enable him to conduct experiments in gardening similar to those conducted by the teacher.

The Governments of two of the Provinces and certain agricultural socities have established schools in which the theory and the practice of farming are both taught, and in these many of the leaders in agricultural progress are being trained. But as only a few persons can get the benefit of the instruction here given without boarding away from home at considerable expense, these schools are not filled with students as we might expect them to be.

The course of study for the common schools is also being carefully scrutinized to see if it cannot be so modified as to give the children, even before they enter their teens a proper bent for business, So much that it now contains is absolutely indispensable for every person to know, no matter what his calling may be, and it is not likely to receive many radical changes. Again, the pupils of the common schools are immature. Few of them have definite ideas as to what business they shall follow when they grow up. More than that, in many cases their minds have not unfolded sufficiently to enable them to go very deeply into any subject, and it is not only a waste of time, but it is positively injurious to force upon them what they are not old enough to comprehend. School boards may say what will be given when the child is ready for it, but no one who is not familiar with him can tell when he is ready.

A child very early takes an interest in plant and animal life, and may profitably receive instruction in the principles of agriculture from the day he enters the school-room. As farming is the most important industry of the people of the Dominion, it is highly important, too, that every child should know something about it. According to the census of 1891 about forty per cent. of our people are engaged on the farm. That is nearly as many as are employed in all the other occupations taken together. If other industries have a claim upon the time of the teacher, surely agriculture has a double

claim. Every teacher must recognize this, and the only question that arises is, "What shall I teach? It must be something that will be of use to all the pupils in my class, and it must be simple or the children will not be able to grasp it, nor I, with all that I am now expected to do, be able to teach it."

Where the teacher has a definite course laid down for him, as there is in certain grades in different provinces of the Dominion, this question does not arise. But in the majority of our schools, it is left with the teacher to give such instruction as he thinks best, and when thus compelled to use his own judgment many conscientious teachers find it a difficult question to decide.

Here are five ways in which every teacher may help the pupils who are interested in the business without doing injustice to the other members of his class.

In the first place the most that a teacher can do with any subject is to awaken an interest in it, and direct his pupils to sources of information. The history a person learns in school is but a small fraction of what he learns after leaving school. The same may be said of any subject in which he is interested. It is not likely that a teacher will awaken a very lively interest in any subject in which he himself is not interested. Enthusiasm is contagious. If the teacher does not have it, he cannot impart it to his pupils until he has come in contact either directly or indirectly, with some one who has it. He will find persons interested in agriculture on good farms, at agricultural exhibitions, or best of all, in agricultural colleges. It is to be hoped that the time is not far distant when all the teachers in rural districts will be graduates of schools in which the principles of agriculture are properly taught. The government of Nova Scotia is trying to hasten the time in that province by granting a bonus from the provincial treasury of from thirty to ninety dollars per annum to the teacher who obtains a diploma from an agricultural college, and teaches certain subjects in the school in which he is employed.

A teacher who does no more than speak well of farming as an occupation, has done something for its advancement. A sneering remark uttered in the schoolroom concerning farming as a business may leave an impression on the minds of the children that will last for years. On the other hand anything said in its favor may make an equally lasting impression.

A few years ago farming was looked upon as a sort of drudgery, suited to the dull and slow-going. But public opinion has changed. So many eminent men have been farmers that the old jokes about the "hayseeders" have lost much of their point, and farming has come to be recognized as a business which requires in order to conduct it successfully, a keen intellect and broad information. No one will err in sounding a note in its praise. Speak highly to your pupils of the men who are advancing the business. They are doing much for the name of Canada. Call their attention to the fact that in these days when man's physical strength is generally deteriorating, the farmer is retaining his full vigor. His work in the open air in touch with mother earth, develops in him the brawn which is so closely associated with brain. Show them that the farmer is no man's servant. He draws his substance from the soil with thanks to none but God. Living as he is away from the vices of the city, he is well situated for developing that nobility of character which is of more value than great riches.

A second way in which teachers may help the rising farmer is by training them to attend to the little things. When the pupil's interests are aroused he will observe more closely. This is most important, for keen observation is very intimately associated with progress. Our scientific men are generally close observers and no doubt this fact has had much to do with their gaining the eminence which they hold. It is worthy of notice, however, that they are not always quick to see things in which they are not interested. An instance of an eminent scientist failing to notice a certain object which many others would have seen was told me a few days ago. The gentleman, having himself derived a great deal of pleasure and profit from a study of the world about him has for a number of years with pen and voice, been urging his fellow mortals to make a better use of their powers of observation. Not long since a person entered his office and asked to be directed to a certain hall in the town in which the scientist resided. The learned gentleman did not remember having ever seen the building. On appeal being made to another person present, it was learned that the hall stood a few rods from the doctor's own door. He knew the name of every wild flower in the district and could read the history of the pebbles over which he walked. His eye was quick to observe natural objects but halls had no interest for him, and he had not seen this one, although he had lived beside it for two years at least.

The way to stimulate close observation is by showing the pupils that it is to their interest to observe. Impress it upon them that in order to succeed a person should have a thorough knowledge of every detail of his business, that matters which seem trifling are often of most importance, and that if they would compete with the men of their time they must not be content to do a thing in a certain way merely because it was done in that way before, but that they must satisfy themselves that there is no better way of doing it.

Dr. Winship gave an instance of the value of close observation at a meeting of the American Institute for Teachers held in Halifax a year ago.

A young friend of his was graduated from a university with high honors and the doctor had great hopes that he would enter one of the learned professions, and be a credit to his family. What was his surprise to learn that he had entered one of the pork-packing establishments of Chicago, and was engaged at killing hogs. In haste he sought the boy's father to see what he was going to do about it. To his surprise he found that gentleman taking the matter calmly, and when the doctor began to express himself very strongly about the way the boy was acting, he was plainly informed that he need not waste his time minding other peoples' business. Much against his will he was forced to leave things as they were. Later he heard that the boy was at different work, he was not killing now, he was scalding. Still the doctor was not pleased. Afterwards he heard of his occupying different positions in the establishment, and then of certain changes which had been introduced at the boy's suggestion. Later he heard he was appointed manager and at the time he was telling us, he said he was superintendent and doing a very satisfactory business.

As he labored in each department he applied all the powers of a well-trained mind to discover the best ways of doing the work. Little points which others had overlooked were observed by him, and the power to see these things made invaluable to the company. The training of our pupils receive should enable them to go and do likewise, when a favorable opportunity presents itself.

A third way in which the teacher may aid young farmers is by training them to read any subject in which they are interested. They should be taught to appreciate the history of its development and the standard works upon it. They should also know where to

find the latest that has been written about it and be taught the importance of taking a periodical devoted to the interests of that particular business.

Any person who has visited the magnificent experimental farm located in this city scarcely needs to be told that he would be confering a great boon upon any farmer by bringing him in touch with the highly instructive work of the eminent specialists here employed. The work done at the different experimental farms should be explained and the pupils led to appreciate the valuable reports which are annually distributed. A person who reads no other agricultural literature than these and the bulletins that go with them, has a very good idea of the most advanced thought respecting the best methods of farming in the Dominion.

The solution of the the question, "How shall we keep the boys and girls on the farm?" is worked out in dollars and cents. Let them see there is more money in farming than in the work they propose to take up, and they will be quite willing to remain on the homestead. Better book-keeping is necessary before this can be done. It is not only a knowledge of how the books should be kept that is needed but also an inclination to keep them. A merchant transacts some business and then turns to his books and makes a note of it. A farmer does business in the field and his book is in the house. He does not go to the house for hours, and when he does go he forgets to record what he has done. If, however, while he has been at school he has been interested in keeping a diary, when night comes he will set down the events of the day and make a note of the item he would otherwise have forgotten.

Every child whether an embryo farmer or not, should be encouraged to keep a diary. Besides the value of the record kept, the training given him in the use of his language will be beneficial and the stimulus derived from recalling in the quietness of the evening the exciting events of the day, when the right or wrong of the part he has taken will appeal to him more strongly, will help him to decide the proper course to pursue in days to come.

The most direct way in which the teacher can prepare his pupils to become successful farmers is to interest them in the plants and animals they see about them. The study of the relations of plants to their environment is very fascinating for many persons, especially children. When they come to realize that the qualities of the many

kinds of roots, stems, flowers and fruits are not matters of accident, but that in the life history of the species it will be found that at some time each peculiarity has enabled its possessor to survive when others of its kind have fallen, what a wonderful world this plant covered earth is to them! And what a pleasure it is for them to find out for themselves how this or that quality has been of service to the plant in its struggle for existence! A wild flower is no longer a meaningless though beautiful speck, wasting its sweetness on the desert air, but a product of the ages fulfilling its mission successfully if it succeeds in attracting the eye of an insect, whether it is ever gazed on by man or not. The poisonous bulb of the Jack-in-the-pulpit is no longer produced to tantalize the hungry Indian, but is the result of a variation that proved so beneficial to the plant in which it occurred, by enabling it to defend itself against graminivorous animals and make a rapid growth through tangling rivals up to the life-giving air above, that its descendents have been preserved, while others have been destroyed. Thorns and thistles are not the result of a curse put upon mankind, but they are a defence for the plants that bear them. The curve of the stamens, the shape of the corolla, the blush on the fruit, the hard coat of the seed form a study for the children which every teacher should encourage. When they fully grasp the fact that these peculiarities of shape, size, color, taste, smell, etc., have become fixed characteristics of the plant by a process of selection, they will not need to be stimulated to sow good seed in their fields by the offer of a prize, but it will be their care to have only the best that can be obtained by any process of selection in their power.

The conditions most favorable for plant growth with respect to soil, moisture, heat, and light, should be studied as closely as the teacher finds expedient. Why certain plots are barren and other plots fertile; why ground bone, nitrate of soda or potash applied to the soil; why a field is plowed, drained, harrowed, rolled, etc., may form subjects for talks with the pupils which will be as profitable for them as an exercise in parsing or even in locating the principle rivers of Asia.

The selection of farm animals is made with considerable care in many parts of the Dominion at the present time, yet a study of the way they have been developed by variation and selection will give the farmer an idea of the possibilities that lie before him in that respect, and lead him to go about his work more carefully and with better prospects of success.

The conditions under which animals thrive best should also be inquired into as closely as the teacher finds advisable. A knowledge of the composition of food stuffs, the process of digestion, the effect of exercise and the conditions of health generally are of the first importance in enabling a person to care for his own health as well as that of the stock on his farm.

It is strongly recommended that this teaching take the form of frequent short talks rather than a few long lessons. I quote from the report of the Superintendent of Education for Nova Scotia, (1894) "Why should not pupils travelling back and forward morning and afternoon from the schools in country sections be amusing and instructing themselves in noticing the wealth of beauty and natural law in the earth, rock, water, vegetation, air, and sky, around them? A few daily hints from a competent teacher would enable them to made their daily tramp to school more pleasant, and therefore their school more delightful. It would also open their eyes to the natural beauties of their own homestead, and to the laws which underlie the successful pursuit of those industries which are of primary importance in supplying mankind with the means of physical life, and in laying the foundation of a prosperous and happy country." The Deputy Minister of Agriculture for Ontario when speaking at the Provincial School Trustees' Association said :

"Could not something further be done by way of simple interesting talks to the pupils on various subjects in agriculture suited to their age and understanding, and suggested by the agricultural nature of the district? If the purpose of such instruction be carefully kept in mind, viz., to interest the pupils in matters pertaining to agriculture, and to instruct them to use their eyes to see what lies on all sides of them and to see correctly, it matters little what part of the immense field of agriculture be selected. As for the material about which to talk and which might be brought right into the class, there is an "excess of riches." The roads upon which they come to school, or which so often keep them from coming to school; the weeds by the roadside and in the fence corners, the flowers, shrubs and trees beyond the fences; the soil of the fields and the different crops growing upon that soil; the insects and the birds which are in some cases so necessary and in others so destructive to the crops, the cheese factory that stands at the four corners; the fruits and the vegetables of the garden—these and other subjects

will suggest, as the question is looked into, that the teacher will have to confine his instruction to a small part of what is probably the widest and most comprehensive science known to man—the science of agriculture."

Let me here quote the opinion of a man who is recognized as an authority on the subject of education. Professor Huxley when speaking to an agricultural club said :

"There are some general principles which apply to all technical training. The first of these, I think, is that practice is to be learned only by practice. The farmer must be made by thorough farm work. I think I might be able to give you a fair account of a bean plant, and of the manner and condition of its growth; but if I were to try to raise a crop of beans your club would probably laugh considerably at the result. Nevertheless, I believe that practical people would be all the better for the scientific knowledge which does not enable me to grow beans. It would keep you from attempting hopeless experiments, and would enable you to take advantage of the innumerable hints which Dame Nature gives to the people who live in direct contact with things."

"And this leads me to the general principle which I think applies to all technical training of school boys and school girls, and that is that they should be lead from observation of the commonest facts to general scientific truths. If I were called upon to frame a course of elementary instruction preparatory to agricuiture, I am not sure I would attempt chemistry, or botany, or physiology or geology, as such. It is a method fraught with the danger of spending too much time and attention on abstraction and theories, on words and notions, instead of things. The history of a bean, of a grain of wheat, of a turnip, of a sheep, of a pig, or of a cow, properly treated—with the introduction of the elements of chemistry, physiology and so on as they come in—would give all the elementary science which is needed for the comprehension of the process of agricuture, in a form easily assimilated by the youthful mind, which loathes anything in the shape of long words and abstract notions."

The motives advanced for teaching the principles of agriculture in our schools may seem commonplace. Very little has been said about mental discipline or moral training, while the profit in dollars and cents has been several times referred to.

The discipline acquired by the pursuit of any study depends less upon the nature of the subject than upon the way it is approached. When properly taught the subject of agriculture will give as good results in that respect as any on the course.

For the development of a noble manhood, no subject could be more helpful than the study of the way in which Nature has dealt with her children. Man, like the changing wind, rushes first in one direction and then in another, but Nature's course has ever been onward; and though we may not like her methods, who is prepared to say they are not the best. Again character building is not a matter of words, but of examples. A man may talk ever so eloquently about purity, but if he himself is not pure, his words will have but little effect. The character you build in those under you, is measured by that which you possess. Unconsciously your pupils are imitating you. Let me entreat you, do nothing unworthy of their imitation. Make it your aim to do well whatever you undertake. Despise meaness wherever you meet it, and while keeping in mind that there are better things than gold and silver, remember that he who is either directly or indirectly transforming the wild lands of Canada into cultivated fields is doing something for the improvement of his country and for the upbuilding of the vast empire of which it forms a part.

DRAWING COURSE OF THE PUBLIC SCHOOL.

By J. A. Dobbie.

[Ottawa Normal School.]

The subject of this paper is the Drawing Course of the Public Schools. Heretofore, considering its value, Drawing has been a subject from the study of which, the results derived have not been commensurate with the time devoted to it. This has probably been due to two causes :—(1) the lack of a thorough knowledge of the subject on the part of the teachers, and (2) the resulting lack of interest aroused in the pupils.

It is not the intention in this paper, however, to refer in detail to the courses at present in vogue in any of the Public Schools of the Dominion, nor to dwell at any length on the excellencies of any of them, but on the other hand to point out briefly wherein they are defective, and to suggest, if possible, feasible remedies in order that the essential features of the most desirable course may be more readily determined.

For this purpose, it will be well to consider the chief aims to be kept in view in framing such an outline of work. These may be stated as follows :—

1. To train the powers of close and accurate observation.
2. To develop and strengthen the judgment.
3. To produce facility in execution and expression, i.e., to bring the hand under the perfect control of the will.
4. To develop the imagination.
5. To cultivate habits of neatness.
6. To develop the aesthetic taste, i.e., to train the pupil to know, to see, and to love the beautiful in nature and in art.

Having obtained these, we will have done much to build up noble characters in the young children, which is the aim of all true education.

While these are some of the aims in the teaching of this Course, there is another side that must not be forgotten and thus neglected. This is the utilitarian side of the work. There is a very large proportion of the pupils of the Public Schools who, when they have finished the Course in these schools, enter upon their life work, and in many cases have no further opportunity for either study or instruction. It should, therefore, be one of the aims of the Public School Course to help these as much as possible while they are within reach, and it is largely for this reason that the utilitarian side of the subject should be looked after during the Public School period.

The Drawing of the Public Schools has been and is now too far advanced for the pupils, and as a result there has been and is a lack of thoroughness and accuracy both on the part of the teachers and the pupils. This is one of the greatest drawbacks of the present Course. To a very large extent, it is simply freehand drawing from copies. Moreover, the forms required in this are unfamiliar to the pupils and therefore so much the more difficult. Again the work has

not been as carefully graded as it should have been. As regards difficulty of execution, there is not enough difference between any particular page of the book of one grade and the corresponding page of the book of any other grade.

There is no possibility at present of the principles of Drawing being taught in the ungraded schools for various reasons :—

(*a*) Lack of sufficient time in which to do the teaching and also accomplish the work expected to be covered in a certain period.

(*b*) Lack of knowledge of the principles of Drawing on the part of the teachers. This is applicable to the teachers in graded schools as well as to those in ungraded schools.

Another drawback at the present time is too much talk of "Art," both in the schools and out of them, to make the work successful. The artist is born and not made, and so long as the Public School teachers harp on the subject of "art" in connection with their work in this subject, Drawing will have to suffer. Again there are far too many exhibitions of pupils' work held, and too much praise given to the work when it is not merited. The tendency of this is that the pupils become overconscious of some little ability which they may have in this line and as a result rest upon their oars, so to speak, and cease to make the further progress which they might make if so much attention had not been paid to their first endeavors. While speaking in this way, it is not intended to convey the idea that the study of works of Art should be entirely neglected. This can only be attempted by those who have made a careful study of the masterpieces. Having done so and decided to have a talk with the class upon the subject, it would be well to choose some of the masterpieces and make a study of their chief beauties or excellencies and how these have been attained or expressed.

Public School pupils are at that stage when they may be led to look upon almost anything as art and it is just here that the unskilled or incompetent teacher is apt to err and give pupils an erroneous conception of true art. It is chiefly owing to this reason that it is better to entirely do away with much of the present instruction in art for young pupils. Much more could be accomplished were it possible to have the walls of the schoolroom hung with good copies of the masterpieces so as to allow the pupils to study them unconsciously and thus come to see the beauty therein contained.

should like to say at once that Manual Training, the training of the hand, the eye, the sense of touch, and through these the brain, is not a universal remedy for all the ills of school work, but I hope to shew that it fills a gap in our modern educational system, that it has a value as a means of formative and disciplinary training, and that it is worthy of a place in any well-considered scheme of education.

There are fashions in education as in other things, and to some extent we may be indebted to fashion for the great attention now being given to this subject and its prominent position in school affairs at the present time, but all students of the history of education must be aware that, although we are hearing and seeing so much of the "new education," it is by no means a subject of entirely modern introduction. It has been advocated by almost all of the great writers who have been leaders of educational thought for several centuries, as necessary to a harmonious, well balanced development of the child in all its faculties, physical, intellectnal, and moral. These writers, however, have been largely disregarded, and, as has been often pointed out, chiefly owing to the influence of the Renaissance scholars with their excessive devotion to the glories of the ancient literature, there has grown up and been perpetuated an entirely wrong notion of what education should consist of, what its true functions are. In the words of a much quoted paragraph from Quick's *Educational Reformers :* "Thus the Renaissance scholars, notwithstanding their admiration of the great nations of antiquity, set up an ideal which those nations would heartily have despised. The schoolmaster very readily adopted this ideal, and schools have been places of learning, not training, ever since."

Modern educationists have long felt that this ideal was wrong, that something was wanting ; that our education was not harmonious and was not a general training of the faculties, as it should be, and to-day we are witnessing the strongest re-action against those classical ideals that has yet been manifested. On all sides it is being felt that the school should be brought more into touch with life, more into line with the needs and aspirations of our modern environment. This introduction of hand work into the school curriculum, now becoming so general, is but an outcome of the feeling that the school should be more in touch with the outer world, and that it should be a place of all-round training, not merely a place for the development of the mental faculties alone.

The drawing of the human form, in part and as a whole, may also be included in this branch of the subject. Too great attention cannot be given to this branch as the pupils will come more closely in touch with Nature than they otherwise would and will thus become more intimate with her.

Mechanical Drawing. The third branch is that of Mechanical Drawing. This is one that is of very great importance and which is at the present time almost entirely neglected. The more Manual Training takes a place in the public school course the greater will be the need of a knowledge of Mechanical Drawing. It is not so much for the amount of work that would be accomplished in the course but more for the training and skill which they would derive from it. There is at present a very small percentage of public school pupils who can take a ruler, compass and pencil and handle them with any degree of ease and accuracy in the drawing of any simple problem. This should not be the case, but it is so and will continue to be so until these pupils have constant practice in the use of these instruments. Then besides acquiring skill, they will become acquainted with what are known as "Working Drawings." Much preparatory work for Manual Training could be accomplished before the pupils would start actual work in that line, enabling them to make much more rapid progress than they otherwise would. Then. too, aside from Manual Training, to the boys and girls leaving school at the close of their public school course, a knowledge of such work would not come amiss, but would be of material value.

Designing. This is a branch which may be used as a kind of recreation work. Their knowledge of nature forms can be utilized to good effect here together with geometrical forms. These may be combined in various ways suitable as patterns for fabrics, wall-papers, carpets, tile-flooring, &c. Here again the pupils would receive training in the use of drawing instruments.

Color Work. Up to the present time, very little attention has been paid to Color Work in any of our schools. In fact the only place where it has been used to any extent is the Kindergarten. If the work which has been started there could be carried on in the primary classes and gradually increased in scope during the succeeding classes, a great deal along this line could be accomplished in the Public School Course. By means of this work the pupils would come to know the standard colors and their various tints and shades. More than this they would learn to make various shades by the com-

bination of two or more different colors and in this way would be constantly learning from the beginning the composition of various colors, or rather how these colors and shades are produced. This early work might consist of work with the standard colors, training them to apply the color uniformly and in not too great quantity, gradually working along until finally they would be able to use these colors in finishing off some of their work in the other branches, such as their designs, so that instead of simply having suggested the outline of a design, it would appear as it actually would appear when seen in the manufactured article. It is only in some such manner as this that pupils can be properly trained in the association of harmonious colors and if this were done, such outrageous combinations as are frequently seen would be a thing of the past. These are a few of the reasons why this work should be carried on, and possibly there are some reasons why it should not or rather could not be made to for a part, mainly, (1) the extra expense, (2) lack of time. This latter is of very little importance as there are at present many minutes wasted each day in the schools. This work would form a kind of brain-reliever so that what requires great efforts on the part of pupils and teachers together with much time, would be accomplished with much less effort and in much less time.

The expense objection may have some force, but yet even that is not so very great but what it might be borne by every child or parent for that matter, except possibly in the case of the very poor when there might be some means unearthed whereby even these might be enabled to enjoy the great benefits to be derived from the study of this work. However it is not the object of this paper to point out the difficulties lying in the way but to show in some manner at least along what lines the present course might be improved.

Freehand, Copying and Memory Drawing has been left until the last owing to its being the least important of all the branches, though at present it forms the chief part of the Drawing Course. The only value that it has is as a training of the hand and a training of the judgment. It should be used very sparingly and in fact only when the object is to show how a certain means of expression is obtained. The chief aims in teaching Drawing are not reached by using this method alone, or chiefly, and so long as it continues to form such a chief part in the course, Drawing will continue to be a subject hated alike by both teacher and pupil as it is at present.

There are other improvements which when introduced will aid very materially in improving the work of Public School pupils :—

(1) Owing to the great tendency of pupils to copy since it appears to them to be much easier than to draw from objects, and also their inability to copy correctly, it is much better to have blank drawing books so as to remove all temptations along this line. These books may be in book form or simply sheets of drawing paper of uniform size sufficient for each day's work, which when finished may be saved and fastened into book form. This will tend more than anything else to make drawing what it should be, the expression of an object as seen by the pupil and not a comparatively poor expression of it as seen by some other person.

(2) A second point of help is the use of the black-board by the pupils. There is a danger here if used too frequently, but if used sparingly greater freedom will result and hence greater expression in the drawings. The danger likely to arise will be incorrect judgment of proportion owing to the closeness of the drawer to the drawing.

(3) Some attention should also be given to the use of the pencil in both hands since there are many cases in which the left hand will be better able to accomplish the required result than the right and vice versa. This does not necessarily need to take much time but can be carried along incidentally with the various branches of the work.

Having endeavoured in the foregoing to point out some of the chief defects at present tending to decrease the practical value of the Public School Drawing Course, and at the same time to suggest certain branches along which it might be improved and made of much more practical value to every pupil having completed such a course, the matter is now before the members of this Dominion Educational Association and a thorough discussion of it would have a very beneficial influence on the future of this very important Department of Public School Curriculum.

THE SCHOOL AS A PREPARATION FOR PRACTICAL LIFE.

By Ernest Smith.
[Principal King's School, Westmount.]

The subject which it is my privilege to bring before this Association today is so broad; so vitally important to every one interested in education; and so many-sided—that the difficulty in preparing this paper has consisted not so much in deciding what to say, as in determining what I could with profit leave unsaid.

From the very nature of the question, I am restrained from making any fanciful, theoretical suggestions and am required to present to you the school as it is seen by the man of business, by the parent, and by the teacher; then, if the picture is not one of an institution in which boys and girls are prepared for practical life I am asked to introduce you to such a scene.

> "Oh wad some power the giftie gie us
> To see ourselves as ithers see us."

We might then find some method of making important practical changes in our present system of education. It seemed to me at the outset, that before one could properly consider the question of preparation for practical life it would be well to have some definite conception of the end which we desire to attain and to know just what it is to live a practical life.

We could then say definitely of a boy leaving school, either he is or he is not yet able to begin life in a practical way.

In order that I might have such a conception myself, I personally interviewed several prominent merchants and professional men, all of whom live practical lives and are large employers of boy and girl labour.

I do not think it will be a waste of time if I picture our schools as some of these men see them.

Mr. A. said that boys, as a rule leave school much too soon. That while at school they receive instruction in many subjects, none of which, so far as he could judge were thoroughly understood, while such important branches of education as gracefulness of move-

ment, politeness, respectful attitude toward elders and those in authority are entirely ignored and are unknown to the majority of boys of fourteen years of age.

Mr. A. emphasized this statement by saying that he would discharge no less than fifteen boys that night because they had not learned the principles of decent behaviour. Ninety per cent of our boys—he said "are impertinence personified."

In reply to some questions asked in the counting house of one of the largest wholesale warehouses in the Dominion, the senior partner said.

"I think our city schools are doing a great work and are doing it well. But our boys are not obliging and well-behaved. The boy who is polite and is willing to oblige anyone, even though it is past his time for leaving the warehouse, is wanted.

I would put the Bible first—a long way first—as a text book. Let sound moral principles be taught and accuracy, speed, truthfulness and honesty will follow. The boy who has learnt to be exact in taking or receiving a message, who is active—without being smart—who is polite and respectful and knows the "three R's" will succeed in living a practical life and will rise."

This same gentleman said that by reason of their great learning, university graduates were of little use in the early stages of commercial life because they are usually too proud to do the ordinary drudgery of the office or warehouse without which success in commercial life is impossible.

A professional man whose name is familiar and whose writings are read with a relish in all parts of the Dominion, suggested that accuracy of observation, definiteness of expression and particularly concisenes of expression should be cultivated. As an aid to accuracy he would like to see shorthand properly and practically studied in our schools. He had found it of the greatest advantage to be able to jot down in shorthand exactly what he saw. He could then produce a character sketch whose exactness and accuracy he could vouch for.

All whom I saw agreed that our schools fail to produce practical boys and girls whenever they do not succeed in developing original thought and that most uncommon of all qualities—common sense.

I believe I am voicing the sentiments of the commercial world generally when I say that boys who are mere machines are useless.

If our schools are to be a preparation they must inculcate such principles as will be of equal value whether the boy begins life on the farm, in the warehouse, in a lawyer's office or in a retail store.

It is my purpose to discuss in this paper the merits or demerits of the course of study adopted in our schools. There is no doubt it has been prepared with but one object, viz., the education of the rising generation in such a way as to fit them for useful, practical life.

Nor do I intend what I have to say to apply to High School or College life. The great majority of our boys and girls do not go beyond the common school and it is therefore necessary to limit my remarks to the common school.

While I would lay special stress upon the study of the proverbial "three R's" I do not for one moment advocate that nothing else shall be done. There are hundreds of different callings in life to-day each requiring a special training after the school has done its best.

I would have every pupil study all the subjects of the elementary course without exception, and if there is no place in the time-table for sports, I would make one. The teacher who can enter into the school sports can exercise a wonderful influence over the school for good. I would insist on politeness and respectful behaviour everywhere, particularly on the street. We must, of course, remember that the teacher who does not respect his boys enough to acknowledge them on the street must not be disappointed if instead of raising their hats they pass him with a rude laugh or a sneering remark.

The question we have to face to-day is: are the pupils in our public elementary schools being prepared for practical life; tical life? or is their education teaching them to despise honest, hard work, to make fun of their parents who do not use such elegant English as the boys and girls do? How many boys are there to-day who can say naturally, "I saw it" instead of "I seen it," or "I did it" instead of "I done it."

Why are so many of our young men leaving the most important industry of this grand country and preferring the miserable pittance enjoyed by a junior clerk who sits in a stuffy office from nine a.m. to six p.m. to the freedom and independence of the farm?

And what is to be said of the girls? those who are to be the mothers of a future Canada? Are we educating them for a practical life?

Why do so many young married people "board" rather than keep house? Is it because the young ladies are afraid or ashamed to attempt house-keeping? Why do so many young ladies become teachers, typewriters, and book-keepers? I cannot think, except in the case of teachers, that it is because of the large salary. Many of these ladies do splendid "crazy-work," but could not mend a torn dress or darn pair of stockings properly to save their lives. They leave their mothers to do that.

I can see but one answer to these queries. The boys consider it beneath their dignity to assist their fathers carrying on the farm; the girls have been educated by someone to the belief that home-life and house-work are a disgrace. Even the word "homely" which in England means so much, is a term of contempt and scorn in Canada. Such education as this, whether given in our schools or elsewhere, is false and impractical in the extreme.

The first principle that I would emphasize in practical education, and I would enforce it in every department of the school — from the Kindergarten up to the highest class—is, "Whatsoever the hand findeth to do, do it with all thy might."

Every pupil should be trained to feel that his individual work affects the whole school and that if he fails to do his work properly, the school as a whole will suffer. He owes it to his school to do the best he can for the honor of the institution in which he receives his education, and this truth should be emphasized in every class of the school.

The Bible should, I think, be systematically used as a text-book in every school, and I would suggest the introduction of certain simple proverbs into the reading lessons for junior classes. The little child who can read the words "I see a big frog on a log" or "The frog and the hog sat on a log" could, I am certain, read and commit to memory such simple proverbs as:

"A wise son makes a glad father." "My son, if sinners entice thee, consent thou not." "A soft answer turneth away wrath."

I realize fully the beauty and simplicity of the hog and frog lessons, but I would like to have two or three important truths like the proverbs quoted, read and learned during the year. They will

stick to a boy through life. I would bring moral influence into every department of school life, into the sports, the class-room, and the manual training room.

Some time ago I was asked where I would enforce exactness or accuracy in a school. I answered by saying everywhere, but particularly in the lower standards. We would not be satisfied with slipshod work from any one, and should insist on practice again and again until correct work is obtained. It will take time, of course, and there will not be much to show for the time spent, but we are getting this important truth that "what is worth doing at all is worth doing well." And who can best afford to spend the time in writing and re-writing an exercise, or a line of figures, the boy of six or the boy of thirteen? In reading, arithmetic, language, we must insist on correctness of expression and exactness of work. I would say once for all, that working for marks only, or a high percentage, is of minor importance.

The aim of the true educator is education, and true education cannot fail to be practical. There are two departments of our educational system which are eminently practical, and which, for this reason, are very interesting to the pupils. I refer to the Kindergarten and to Manual Training. It is very easy to see that every child is delighted with his work in these classes because as he goes on he can see the result of his work. In the Kindergarten the little one is trained, for instance, to place certain strips of coloured paper in such a way as to make a star, a cross or a bow, and when the pattern is finished, it is *his*, for *he* made it.

The same thing occurs in the Manual Training room. Here boys use their arms, legs, eyes, hands, and their common sense in sawing, planing, chiselling, or carving a piece of wood, and if they make a mistake they must begin again with a piece of wood in the rough. They are not working for examinations and those horrid marks, they are working for models, for exact models, and they mean to have them. They know what they are required to make before they begin, they can see it in progress of manufacture and can test its accuracy at every stage, and when it is finished they are absolutely certain, without asking any teacher, whether the model is correct or inaccurate. If the latter, they know where, and why.

Apply this principle to general education and I think you have the definition of a school which gives a preparation for practical life.

MANUAL TRAINING

By T. B. KIDNER, TRURO, N.S.

Director for Nova Scotia of the Macdonald Manual Training Fund.

The subject known, for want of a better term, as Manual Training, upon which I have been asked to say a few words to-day, is at present receiving much attention in Canada. The great scheme of Sir William Macdonald and Professor Robertson for the introduction of Manual Training into the schools of the Dominion is causing the eyes of all teachers to be directed to it. Many Canadian teachers have taken the opportunity afforded by this munificent scheme to make themselves personally acquainted with this new Education, as it has been called, and have become, in consequence, enthusiastic advocates of it. As at first sight, the working with tools and wood in a room fitted as a workshop may not seem to be very clearly related to school work, I propose first to consider its claims to a place in the School Curriculum, its fitness as a part of a liberal education.

All who have been in the profession of teaching for any length of time must be quite used to the periodical cropping up of some new feature of educational work that is going to be a panacea for all the ills and troubles of our arduous, and at times, thankless tasks. Teachers on all hands are crying out against the number of subjects they are expected to be proficient in, the variety of things they are required to impart, and are disposed, and rightly so, to regard very critically the claims for a new subject for a place in an already overburdened curriculum.

I believe, however, that in no profession are the members more ready than are the members of our own noble calling, to constantly and conscientiously strive to be abreast of the times and their responsibilities. That this is necessary we all feel, for the needs of our civillization and our life are ever changing and advancing, and if we are to do our best for our future men and women, for our country, our nation, and our race, it behooves us to be thoroughly "up-to-date," ready to adapt ourselves and our methods to these changing needs, ready to examine any new ideas and to adopt them if necessary. I

should like to say at once that Manual Training, the training of the hand, the eye, the sense of touch, and through these the brain, is not a universal remedy for all the ills of school work, but I hope to shew that it fills a gap in our modern educational system, that it has a value as a means of formative and disciplinary training, and that it is worthy of a place in any well-considered scheme of education.

There are fashions in education as in other things, and to some extent we may be indebted to fashion for the great attention now being given to this subject and its prominent position in school affairs at the present time, but all students of the history of education must be aware that, although we are hearing and seeing so much of the "new education," it is by no means a subject of entirely modern introduction. It has been advocated by almost all of the great writers who have been leaders of educational thought for several centuries, as necessary to a harmonious, well balanced development of the child in all its faculties, physical, intellectnal, and moral. These writers, however, have been largely disregarded, and, as has been often pointed out, chiefly owing to the influence of the Renaissance scholars with their excessive devotion to the glories of the ancient literature, there has grown up and been perpetuated an entirely wrong notion of what education should consist of, what its true functions are. In the words of a much quoted paragraph from Quick's *Educational Reformers :* "Thus the Renaissance scholars, notwithstanding their admiration of the great nations of antiquity, set up an ideal which those nations would heartily have despised. The schoolmaster very readily adopted this ideal, and schools have been places of learning, not training, ever since."

Modern educationists have long felt that this ideal was wrong, that something was wanting ; that our education was not harmonious and was not a general training of the faculties, as it should be, and to-day we are witnessing the strongest re-action against those classical ideals that has yet been manifested. On all sides it is being felt that the school should be brought more into touch with life, more into line with the needs and aspirations of our modern environment. This introduction of hand work into the school curriculum, now becoming so general, is but an outcome of the feeling that the school should be more in touch with the outer world, and that it should be a place of all-round training, not merely a place for the development of the mental faculties alone.

As Montaigne so tersely put it: "It is not a soul, it is not a body, that has to be educated, it is a man." The two may not be severed, and as Plato says: "It is not right to educate the one without the other, but they should be urged on equally like a pair of horses harnessed to a single chariot."

I will not weary you with quotations from the many writers of greater or less renown who have during several centuries advocated hand work as a means of education, but must mention those two men whose names are known to us chiefly as founders of the Kindergarten system, Froebel and Pestalozzi. Manual Training, as we have it to-day, is simply the application and extension to older scholars of the fundamental principle of the Kindergarten, "Learning by doing," or as I prefer to put it as the motto of every Manual Training school to-day: "They shall do and find out for themselves."

In my experience in pioneer work in Manual Training here and in England, I have found that the subject appeals to different people from widely different standpoints. The utilitarian is perhaps the commonest aspect in which Manual Training is liable to be regarded. Now, accepting the ordinary use of the term, it must be clearly understood, that while the training in technical skill, manual dexterity and practical work is of the utmost value in after life for utilitarian purposes, yet if this were its sole aim and purpose it would certainly be open to question whether so much valuable time should be devoted to it during the years when the child is being developed and its character being formed. Manual Training, however, bases its claims not on its utilitarian bearing, strong as that may be, but on its fitness as a formative and disciplinary training of the mind, the will and the body, or the intellect, the emotions and the physical powers.

All modern writers on Psychology lay great stress on the value of the hand as a knowledge giver, and it is to the intimate connection between the hand and the brain that Manual Training owes its chief value. The brain of a human being, together with the rest of the body, is subject to certain laws of growth, that is to say their growth and development depend largely on the due exercise of their functions. As everyone knows, a limb or portion of the body unused for a time, becomes atrophied and helpless, but by constant, regular exercise the body is strengthened and developed more and more. Now the power and efficiency of a human brain depend then upon the proper development of its cells, by suitable exercise, to the

point at which they become functionally active. The notion that a large brain necessarily meant power of thought and action was long ago dispelled and it was shown instead that its efficiency depended as much on its thorough organization, its healthy development, as on its size or weight. The portion of the brain known to physiologists as the "motor area," depends for its growth on the proper exercise of the organs of the body, and muscular exercise, whether ordinary labour, gymnastics, play or Manual Training is absolutely necessary for that growth. As a leading writer on this subject has said :

"It is a common observation that in persons who have been long bedridden by chronic disease, and debarred from all muscular exercise, the whole motor area of the brain is, after death, more or less atrophied and water-logged. It is unquestionably essential to the welfare of the large and complicated motor centres of the hand, that the parts with which they are immediately connected should be used in an active and varied manner." The close interdependence of these motor areas with the higher sensory areas has long been recognized, and it has been shown that the development of the latter depends in a large measure on the growth and development of the motor areas. Again, it has been shown that the period of brain growth in a human being is chiefly between the ages of four and fourteen, and thus it is that the advocates of Manual Training claim for their subject so prominent a place in the school during that period. The old distinction of "brain work" and "Manual work" is then a false one, for all manual work must be brain work to a greater or less extent and the difference is only one of degree. Of course all manual work does not tend to the development of the higher brain centres, for if so, it might at once be objected that our gymnastics and games are all that are necessary in this connection. That this is not so can be shown by the fact that such physical exercises appeal to the coarser fundamental muscles used in actions requiring strength rather than delicate adjustment. Manual training, in its nicer and more accurate perceptions involved, will reach and develop the finer and more delicate centres of the brain, training and strengthening them by constant use until the body is thoroughly and completely under the control of the inhibitory power of a well balanced, healthy and vigorous mind.

To come now to what is perhaps one of the most important attributes claimed for Manual Training, its effects on the development

of moral character. At first sight this may seem to be abrogating to the subject something in no way connected with it. "Moral training, formation of character" as a distinguished visitor to my school said recently, "what in the world has such work as this to do with it?" I will try and show why we claim for Manual Training a distinct value along this line. First, I will deal with the question of accuracy, for the lack of accurate thought, a weak and flabby method of approaching vital questions, is one of the most glaring evils of the world to-day. In the Manual Training room there is no approximation, the thing is *right or wrong*, and it is delightful indeed to see aroused in a boy's mind a direct appreciation of truth and accuracy very early in his Manual Training experience. In the concrete work of the Manual Training room, the results of deviation from exactitude are at once apparent to the child, as they are, I venture to say, in no other subject of school work. The simple operation of sawing a piece of wood to a given length becomes a most potent and effectual argument, appealing directly to the child if he is wrong, and while perhaps to the boy it may at first mean simply the spoiling of his piece of work, it involves a fresh effort, a more careful concentration of his powers, if his next attempt is to be successful. We have heard so often that "if we sow an act, we reap a habit," that like a good deal of proverbial philosophy it is in danger of losing its force, but in such acts of striving towards accuracy and truth, even though it be but in apparently simple things, the child is laying a foundation for the growth of moral character, learning to set for himself a standard of right and wrong. Again, I said just now that the will power, the power of inhibition, is largely developed by Manual Training. The man who has not learned to control himself in small actions, cannot effectively control his passions and desires. Much of our crime is the direct result of want of proper education. want of proper training of inhibitory powers in youth. The sense of power, of having accomplished something, which comes to the boy on the successful completion of his piece of work, is a means of forming and strengthening his character whose value cannot be over-estimated. Sir James Crichton-Browne, the distinguished surgeon and writer has said: "Depend upon it that a strong, steady, adriot and obedient right hand is one of man's proudest possessions; as proud a possession as a glib tongue, for there must be a strong, steady, adroit and obedient brain behind to drive it."

Habits of independence and self reliance are formed and fostered by the individual character of the work. The boy is face to face with his own difficulties, and these he has to strive to overcome by himself alone. No amount of "copying" will help him; as I said at the beginning "he has to do for himself" and this alone marks a tremendous difference in this and some other subjects of school work. Owing to the necessity of keeping large classes at some dead level, at some medium pace, in in many of the ordinary school subjects the teacher is compelled to "mark time" with his smarter pupils and to unduly press the backward ones. In the Manual Training room this is not the case, the smart boy goes on without waiting for the medium ones and the dullards, not wasting his time forming bad habits and getting into mischief perhaps; while the boy who is slow and awkward with his work goes slowly and performs simpler tasks, but, and this is most important, has to do them thoroughly and well. This individual character of the work as opposed to the class teaching in vogue in other subjects is one of the best possible aids in the formation of character. It allows and indeed calls for most imperatively, the study of the individual child by the teacher, because while the child goes at his own pace, the teacher must be able to judge and see that it is the child's best pace, though usually the attraction of the work itself for most boys is sufficient to ensure this. In speaking of those children, to be found in every class, who for some reason or other are usually at the bottom of it in the ordinary studies, the Manual Training room is often a positive means of salvation. Such boys after a while get to believe that it is useless to try, that they are sure to be behind their fellows, but often these boys find in the practical work of the Manual Training room something that appeals to them, something that calls forth their efforts, something that they can do and do well. The effect on them is, and this is no chimerical claim, but is the opinion of all who have carefully observed the workings of the system, that they regain in a large measure their self respect and are encouraged to try again in those studies which are perhaps distasteful to them and in which they have not hitherto been successful. On the other hand, I have found it an excellent corrective for those boys who, by dint perhaps of an exceptional memory, find their literary studies come all too easily, slipping through their exams. with no trouble at all. Often in the Manual Training room they discover that "there are more things

in heaven and on earth than are dreamed of in their philosophy," and that life is not all composed of books and examination papers.

In the cultivation of habits of industry, of concentration and of perseverance, Manual Training plays an important part. All visitors to Manual Training rooms, especially those in the habit of visiting other school rooms, are struck with the earnest absorption of the boys in their tasks; from its nature the work appeals to them, and their minds and hearts are concentrated on reaching the goal of the completed exercise.

The training in habits of order given by this work is of undoubted value in every day life, and the inculcation of such habits necessarily follows carefully planned, systematic, step by step work in which the child can clearly follow the sequence for himself. Cleanliness and neatness are other important attributes of hand work, and while these perhaps may be looked after in the ordinary school work, they are an essential part of the work in the Manual Training room.

As a preparation for specialised technical instruction in after years, Manual Training is most valuable, for while it must be clearly understood that in no sense can Manual Training be regarded as trade teaching, yet the dexterity and skill of hand and eye developed in the boy and the power of making and interpreting a working drawing, form an admirable basis on which trade instruction can afterwards be given. In England, the mistake was made of establishing the great technical or trade training schools before Manual Training had been made a part of the elementary school system, and their efforts were largely wasted at first because the almost exclusively literary character of the common school curriculum had not provided a suitable basis on which the special technical teaching could be carried forward.

The distinction between the productive workshop and the Manual Training room is important, for to the casual obeserver the fact that wood and woodworking tools are being used would seem to indicate that some sort of trade work is being carried on, but the aims of the Manual Training room are entirely different. To the workman the objective is the article to be produced, and the methods are of secondary importance, while in the Manual Training room, the *doing* and not the thing when done is of prime importance to the teacher of Manual Training, who has in view, not the production of an article, but the development of a human being.

Something too may be claimed on the utilitarian side if merely handiness and deftness are learned by the child. We can all recall instances of men, well educated in the ordinary acceptance of the term, whose "fingers," to use a cant phrase, are all thumbs, and who are helpless in some of the ordinary affairs of every day life. A perfectly educated man has been defined as "one whose hand follows obediently the promptings and directing of a well organized brain," and thus we claim for Manual Training a place, and a prominent one at that, in any scheme of education.

I said earlier that teachers today are confronted with such a variety of subjects and have such great difficulty in finding time for them all, that they may well view with some suspicion the introduction of yet another. During the early days of the Manual Training movement, the astonishing fact was proved by careful and reliable tests carried out in some of the large schools of the London School Board, that while Manual Training claimed the boys for ten per cent. of their precious time at school, yet the literary subjects did not suffer but in most cases were positively improved where Manual Training was taken. Another difficulty confronting the pioneers of this practical instruction both in England and the United States was the providing of suitable teachers. Varied expedients were tried, skilled workman were taken and given some instruction in pedagogic methods and trained teachers were given instruction in workshop methods. Generally speaking, it was found that while in many cases the skilled handicraftsman in time made an excellent teacher, it was necessary for the full success of the work that the instructor in Manual Training should be a teacher first and a skilled worker afterwards. It was seen that, of necessity, he must be trained in the methods of pedagogy, well acquainted with child life and with the aims and ideals of educators. Some artistic training is also a necessity for the Manual Training teacher. The training of the eye to a sense of form and beauty is another important phase of the system, and in the hands of capable teachers, trained in the perception of beauty of form, colour and proportion, Manual Training forms a most effectual means of doing this work.

As a weighty testimony to its value, I should like, in conclusion, to quote the words of one of our foremost English educationists, whose name is familiar to most of you, Sir Philip Magnus, the head of the famous City & Guilds of London Institute. Speaking at the

annual conference of the National Association of Manual Training Teachers in London last year he said:

"'Nothing is more striking than the influence exercised by Manual Training in modifying our conceptions of the aim, purpose and methods of education generally. It has been the means of changing to a great extent the character of the teaching, not only in our primary, but in our higher schools and even in the Universities. It has removed from us the reproach that our education is "too bookish" and has added the shop to the laboratory and class-room as an essential part of a well-equipped school. It has shown us that what we call "facility for learning" depends, not so much upon the capacity for passively receiving knowledge, as upon the active exercise of our several faculties in acquiring it. This alone implies a great change in the methods of teaching. It discourages the old system of repression and enforcement of silence in the school room, so painful to the pupil, and substitutes the Froebellian method of utllizing all spontaneous activity and of directing it on lines productive of serviceable aptitudes, What is now understood by the phrase "learning by doing" is the lesson that Manual Training has taught us. It is applicable to all sorts of subjects, to the teaching of Geometry, Arithmetic, Geography, and even History and Language. It has entirely revolutionized the methods of science teaching. When, owing to the succession of new discoveries and their bearing upon ordinary life interests, the necessity of introducing science into our schools was first realised, the acquisition of knowledge as to facts was regarded as an end in itself of sufficient importance, apart altogether from the value of the study as a mental discipline. Much of the science teaching of a few years since was little more than the satisfaction of the learner's curiosity with regard to the more startling wonders of the universe. It furnished information as to the Phenomena of Nature, but failed to educate in the true sense of the word. Only recently has the reason been discovered of the too evident failure of science lessons to give that all round training of the faculties which the old learning provided. And we owe it largely to the experience gained in the workshop that the discovery has been made, and that the methods of science teaching have been entirely changed."

These are some few of the things which lead us to claim for Manual Training a place in the educational system. Thanks to the splendid scheme of Sir Wm. C. Macdonald and Prof. Robertson, to

which I have already referred, the teachers and people of Canada are to-day receiving, in the best possible way, by an object lesson, some ideas of the possibilities and scope of the subject. Those of us who have been fortunate enough to be associated with the beginnings of the movement in Canada have every reason to feel proud of the way in which it is being taken hold of and welcomed. We feel confident that the experience of Manual Training pioneers in other countries will be our experience here, that, wherever the subject has been thoroughly tried, in scarcely a single instance has it been dropped.

May I, in conclusion, express the hope that in Canada it will prove for itself what its advocates claim for it, and commend itself to all who have the welfare of the children at heart, as a valuable adjunct to our present means for their general culture and development.

INDEPENDENT INDIVIDUAL EFFORT—OR THE UP-BUILDING OF CHARACTER.

By W. A. McINTYRE, B.A., Winnipeg.

If there is any one in this meeting whose highest thought in teaching is the preparation of candidates for Departmental Examinations, whose life is bounded by marks and percentages and honor lists, to him my words will be but vain babbling and unintelligible jargon; but if there is one who holds that the supreme end of education, whether in the family, the church, the school or the state, is the upbuilding of character, the enriching and purifying of life, to him I may perhaps suggest something worthy of discussion. I am sure I am not extreme when I state that the doctrine that scholarship alone is the end of education, or that a teacher's work is measured by his ability to pass pupils, is in actual practice followed by many schoolmasters and not only in primary schools but more noticeable in High Schools and Colleges. Two days after the results of the recent teachers' examinations were made known through the press, I read in one of the local papers that "Mr. A. B., our worthy principal, at the recent examination for teachers passed sixteen out of seventeen of his pupils. This is the highest percentage in the country, and it reflects credit upon Mr. A. B., testifying to the high character of the work that is done." As a matter of fact, I know Mr. A. B., and I should prefer any children of mine to pass the time where village loafers congregate rather than come under his influence. For he is the personification of uncouthness, coarseness and self-assertion, and his school is completely lacking in that refinement and generosity which should be the possession of each pupil that passes through our public schools. Some time ago a teacher from Ontario wrote a friend in Manitoba asking him to use his influence in securing a position in the west. His chief qualification was that "he never passed less than seventy per cent. of his pupils and never more than ninety-five per cent." He neglected to state that his habits were most objectionable, that his disposition was such that he could remain in no village for more than a year, that he was a narrow and bigoted partizan whose influence over growing lives was disastrous.

We do not wish, in our business relations, to deal with uncultured, uncouth specimens of humanity, and, in our social intercourse,

we are careful to cultivate the acquaintance of those who have not only intelligence, but that style and manner which characterize the gentleman. It may be said that internal worth and not form determines the man. In answer to this it may be said that where real worth exists the form will be desired, and many a man of real worth suffers because he has not that repose and manner which indicate "the man of good breeding." Again, it may be said that the special aim of the school is "scholarship," and it is the duty of the home and society to look after manners. In answer to this it might be asked "Who settled it that the special aim of the school was "scholarship"? and if it were, is not the great aim of education—the upbuilding of life—of more account than this special aim? There is not an institution of civilization but has a right to expect that the school will supplement its legitimate efforts to improve the condition of mankind The school which carries on its work as if it were not co-operating with home and society is decidedly "out of order." There must be as good manners, as good style, as much consideration for others in school as in any home or any society in the country. Once more it may be urged that we don't want prigs and popinjays, but men. Most certainly we want men, but we want *gentle men* and not boors and hoodlums.

I believe that a careful examination will show that in every country there are but two classes of teachers—those who think in terms of the subject of study, and those who think in terms of the pupils. The former, looking at an array of text-books asks "How can I get my pupils to know these?"; the other looking at the pupils enquires "How can I by aid of these text-books, and otherwise, work the greatest lasting good to the souls placed in my charge?" And between these two there is a great gulf fixed. I shall, therefore, say nothing to any teacher, any department or examining board, possessed of the lower ideal. "They are joined to their idols, let them alone." But I have a word or two for you who believe, that first, last and all the time, education should seek the highest well-being of those who are being taught.

The soul of a child on attaining school age may be likened to a small circle. In it are included all the child is—his habits, tastes, knowledge, disposition, and all that goes to make up his life. Outside of him there are countless other powers, habits, tastes and the like, not yet acquired by the growing soul. The process of education consists in this—that a pupil by his free self-activity must reach

outward to these unacquired possibilities and make them his own. According to this idea over-education is an impossibility for the boundary of no circle reaches infinity. Extension goes on into and through eternity. According to this idea, education is the result of the pupil's own acts. The teacher's function is to guide, inspire and exercise the kindest watch-care. And whatever may be said of the education which chiefly considers class standing, this much can be said of the education which aims at character—that it is above all things practical—for character is the one thing that should be the possession of every living soul.

If education, then, is synonymous with soul-growth, it might be in order to examine some of its products. It may be that in this way, we can arrive at a means of testing the character of a teacher's work. In the first place an educated person should have knowledge—knowledge of man, knowledge of his environment. And it might be remarked that in this day, when all men find themselves, willing or unwilling, called upon to wrestle with one another, single or in giant combinations, it would seem to be more important for one to have a knowledge of social and political forces, and the means whereby justice and mercy may triumph over intolerance and evil, than it is to have a knowledge of one of the dead languages or the differential calculus. The other day in a small country village where owing to lax supervision of children's morals the boys frequented the meeting-place of the rowdy element, learned to smoke cigarettes and and to use profane language, and where the girls gathered from their street associations how to be rude, vulgar and impolite, the teacher up on the hill, in the little red school-house, was attempting to offset the evil by extra doses from Henderson's Cram Book, Gibney's Probable Questions and Entrance Helps. How is this kind of thing going to build a soul strong in virtue, truth and nobility? Give the pupils knowledge by all means, but let it be real knowledge, such as will fit for life in its quietest moments and its mightiest struggles.

A second product of education is power—power physical, intellectual, moral. It is not too much to say that when such power is not developed there is no real education whatever. If a youth comes forth from a school with a sickly body, as a result of habits contracted in study, if his observation, imagination and judgment lose their keenness, if the power to choose, execute and resist are lacking, then the teacher is an educational misfit, even if his pupils have taken ninety per cent, on the Departmental Examinations.

A third product of education is habit. Who can value the importance of the cultivation of right habits in early years—habits of neatness, honesty, punctuality, industry and the like? It would seem that any teacher can measure the work he is doing by considering from day to day, the habits which are being formed by his pupils.

Another product of education is taste—a taste for pure literature, good music and high art. Moreover, it is possible for children to have much knowledge of these subjects without any real acquired taste. One thing is certain—that he who has no taste himself can never develop taste in his pupils. Yet those who prepare our teachers sometimes overlook this. A big awkward grasping individual came into one of our High Schools to prepare as teacher. He was strong, industrious, clear headed—just the man to take a high mark at the closing examination. The teachers of that High School knew his value from the advertising stand point. He stood at the top of the list when the results were published—but he was just as awkward, coarse and grasping as the day he was enrolled. Tell me, please, what that High School did for him. I tell you that it wrought him evil—and not him only but the whole community of which he was to become a member. What would I have then? I shall tell you. I should first study the cause of the coarseness, awkwardness and greed, and then try to supplant these by refinement, grace and generosity. And if this meant that I should make evening parties in my own home, to set before such souls as this ideals of manliness and womanliness, I should have such parties even if the Trigonometry went by the board.

I need not refer to other products of education such as good conduct, right disposition, refinement of feeling, breadth of view. They are all summed up in this word—character—which is eternal. For all true welfare looks towards the eternities—the eternities of faith and hope and love. Have ye not read that "Whether there be prophecies they shall fail; whether there be tongues they shall cease; whether there be *knowledge* it shall vanish away . . . . . And now *abideth* faith, hope and charity, these three." This I take it is the test for all teachers. Let us ask ourselves today if the results of our work are truly abiding.

Now, it is manifest that in this work of soul-building that no two souls should be treated in the same way. For no two are the

same by heredity and home-education, no two have the same power of adaptation, that is, cannot make the same progress. A certain doctor placed his bottles side by side on a shelf, then proceeded on the first day to give all his patients a dose from the first bottle, the next day he gave a dose from the second bottle, and so on. In this way the general appearance of the shelf was good—but the patients all died. There are some teachers who with their rigorous programmes demand that all pupils shall travel the same road, at the same rate, with the same limping gait. If there were only one principle on education to build upon it would seem to be this, that *the individuality of a pupil is sacred and that each soul if carefully studied will reveal the laws that should govern its unfolding.* And this is none the less true because the principle of classification may on occasions be resorted to with profit. It is not too much to urge that one of the greatest evils in our systems is the evil of over-classification. He who has not learned to recognize the individual in the class is not yet a master in the most difficult of all arts.

Now, the first principle governing the upbuilding of a life is the principle of self-activity. The world has been slow to accept such a principle, rather aiming at education through passivity or education through rigorously-directed activity. But it is evident that real education begins in any soul when he takes himself in hand. In my childhood, I attended a country school where there was one pupil who was notorious for his slovenliness and uncouthness. Notwithstanding the admonitions and punishments from parents and teacher he came to school with dirty hands and face, toozled hair, unbrushed coat, muddy boots, and all the rest of it you can imagine. Well, one day when this boy was about sixteen, for some unaccountable reason—in all probability a female reason—he began to show signs of waking up. Then nothing was too good for him. He kept his coat clean and ransacked his sister's work basket for a supply of neckties; his hands were white, his hair was combed and oiled, and his boots showed that there had been a free use of tallow or bear's grease. He had taken himself in hand and all the parents and teachers in Christendom couldn't hold him back. Is there anything truer than this, that a soul with an all-sufficient motive finds no difficulty too great to overcome? Is not the first duty of a teacher to enlist the sympathies of his pupils so that free self-activity will be a natural and necessary result?

I have said that in all education a child must learn to take himself in hand. A few illustrations from primary work will show how this may be done. Down on the next concession, Miss Persimmons teaches school. The other morning a stranger heard something like this "Attention! Eyes-front! Feet-square! Hands-at-sides! Books-on-desks! Books-open! First-sentence—read! Take-breath! Eyes-wink! etc." Yet you cannot convince Miss Persimmons that this is not ideal. Has she not the quietest and most orderly school in the whole country side?—No! We cannot go that far. There is one quieter community that resembles it somewhat—the village graveyard. Has not the poet truly said

> "Self-reverence, self-knowledge, self-control,
> These three alone lead life to sovereign power?"

How in the name of all that is reasonable can one reach this ideal of self-government, if he is kept in the swaddling clothes of infancy or the straight-jacket of a prison house?

And if there is room for independent action in the matter of conduct, there is opportunity for independent effort in all matters of study.

Is it Reading? Then that abomination, the *word method*, which makes a pupil dependent on a teacher for all that he knows, will give way to a more rational system of instruction. Then, too, in teaching that forgotten art—oral reading—the old text with selections marked "Louder—with force—rising inflection—more slowly," will have no place, for a teacher will realize that impression precedes expression, and that no two can read any selection in the same manner. What is necessary is that a pupil shall clearly understand and feel the truth that is to be expressed, and then with sympathy set forth this truth in his own way.

Is it Penmanship? Then the matter is easy. In my old school days we had a boy who was a most notorious penman. He shovelled the ink upon the paper. He had more blots than letters. One day however, he joined some of the other boys in sending to a Business College for specimens of penmanship. In due time he received back one of those wonderful birds, with wings like spiral springs, and tail like a five cent fan. With his prize in hand, he moved to the seat of the best writer in the school who was only too pleased to examine the work of art. In the meantime our budding genius seized a piece of paper and the prize penman's pen and proceeded to copy the bird.

It was probably the first time in his life that he had a good pen, good ink, good paper at one time, and marvellous to relate, at the first dash he drew as pretty a breast line as ever decorated paper. That was enough. He carried that line all around the school to show it repeating over and over again. "See what I done." Now, what was the result? Immediately this young fellow began to feel he could do something, he took himself in hand, and to-day he is as fine a penman as you would wish to meet.

Is it Mathematics? Then what is to prevent pupils from making then their own problems for solution? This is natural, and it is necessary to the highest results.

Is it Science? Then why should not our senior pupils follow a scientific method by beginning with a problem, devising their own experiments to assist in a solution? Instead of this, many of them have never passed beyond the stage of performing the experiments suggested by text-books, and as a result they learn the facts of science, but have no knowledge of scientific methods.

It is not necessary to proceed any further by way of illustration. In every subject there are countless opportunities for throwing the pupil on his own resources, and the teacher is wise who has learned to be as useless as possible, if thereby the student may learn what is involved in self-direction and self-conquest.

What is needed in our political, social and religious world more than personal independence? Out of one hundred young people taken at random, ninety-three confessed to having the same political bearing as their parents, and ninety-seven to having the same religious bias. This was no doubt flattering to the parents, whose works must have commended them to their children, but it shows also that in most cases, we are what we are, by custom rather than by conviction. Our political and economic life will never approach what it should be, nor even what it once was, without personal struggle. And even if we could reach our ideal without a struggle, it would not be advisable. When the citizens of any country, through trial and tribulation, reach any moral or spiritual status, it does not follow that their decendants can quietly assume the standing that has been gained. The battle must on occasions be fought over again. A moral condition can not be assumed, it must be voluntarily adopted.

PUBLIC SCHOOL EDUCATION IN NEW BRUNSWICK.

By John Brittain, Esq.
[Normal School, Fredericton, N.B.]

Since all the Canadian provinces are to be heard from this afternoon, and New Brunswick is relatively but a small one, I will confine myself to a very brief statement of some of the problems which we have met in the course of our educational history and of the progress we have made in solving them.

After a warm political conflict the question of financial support for the Public Schools was settled in 1871. The school revenue has since that time been drawn from three sources. The Provincial Government contributes an allowance which is paid directly to the teachers, each county asessses and pays to the Boards of School Trustees an amount which aggregates thirty cents per head on the population and each district except in cities and incorporated towns votes annually such a sum as the means and the generosity of its people will permit toward the support of the local school or schools. In towns and cities the amount to be assessed for schools is determined by the School Board.

The same law enacted that the Public Schools should be non-sectarian. This provision, which prohibited dogmatic religious instruction, was objected to vigorously by Roman Catholics and led to much strife and bitterness. In 1875, however, some important concessions were made in the administration of the law which were accepted as a modus vivendi by both parties. Under these arrangements in the cities and some of the towns, Roman Catholic teachers are assigned to certain schools which are attended in preference by the children of Roman Catholic parents. This arrangement makes it possible to give doctrinal lessons before or after school hours.

In all the schools, however, the teacher has the privilege of opening the session by reading a portion of scripture (from the Common or the Douay version), and offering the Lord's Prayer. And it is the duty of every teacher to give instruction in the principles of Christian morality and to strive earnestly to encourage and maintain the practice of these principles by his pupils.

All candidates for a permanent license to teach, except graduates in arts and persons who have taken a professional course at a recognized institution, are required to attend the Provincial Normal School for at least one year (two terms.) Students come from all parts of the province. English and French, Catholic and Protestant—they meet together in the classes and in all the work of the school, yet the utmost harmony prevails. No interference with the religious views of any student would be tolerated by the public opinion of the school. In the country, Roman Catholic students are often employed in Protestant districts, and vice versa, to the entire satisfaction of the people. So rests, for the present, the question of religious instruction.

In the matter of Departmental Examinations, we hold a middle ground. For the first eight years of the school course, the teachers are left quite to themselves in the matter of examinations, except such tests, largely oral, as are given by Inspectors and Superintendents during their periodical visitations. On the completion of the Common School course, pupils who desire to enter a High School are required to pass the Entrance Examination. The High School teachers and the Common School teachers from whose schools the candidates came are associated in reading and estimating the papers of the candidates. Each paper is read by two persons—one of the High School teachers and one of the teachers of Grade VIII. This seems to me to be an excellent arrangement, since it gives the candidate the benefit of the judgment of two examiners on each of his papers; and not only may the High School teachers thus obtain much definite knowledge of the intellectual powers and equipment of the pupils soon to be under their tuition, but the Common School teachers also may learn much from a careful examination of the work done by the pupils from schools of other teachers. A small allowance is made to the teachers for their work in examining the papers.

During the High School course no official examination is asked for, nor is it required in order to win the diploma of the school. Those who have completed the course may, however, take either the University Matriculation Examination or the High School Leaving Examination. Most of the papers in these two examinations are identical, but the Leaving Examination permits more options.

Candidates for a Teacher's License in New Brunswick are required to pass a preliminary examination for admission to the Normal

School and a final examination, partly academic and partly professional, on completing their course at the Normal School. Holders of Matriculation and High School leaving certificates are exempted from the preliminary examination.

Although the majority of our teachers, if I mistake not, believe that written examinations, when conducted by judicious and conscientious examiners, are useful both as incentives to effort and as tests of scholarship and intellectual power, yet it is, I think, the general opinion that we have a sufficient number of official examinations.

The course of study for our common schools (8 grades) includes, besides Reading, Spelling, Writing and Arithmetic, Grammar, Geography, History, Algebra, Health and Nature Lessons, Music and Drawing, with Latin as an optional supject in the two highest grades (7 & 8).

Complaints have often been heard that the course is overcrowded and in response to this criticism, Geometry was dropped and a year ago from the work of the common school grade. One of our Inspectors advises, in his last report, that Algebra also be left to the High Schools, and his views are shared by some of our most experienced teachers.

The question of time is not so serious in the city and town schools where each teacher has the care of but one or two grades, as in the country schools where the large number of classes in one room make it difficult for the teacher to find even a short time for each class in each subject. This problem has been solved by some of our teachers both in the common and the higher schools, in a manner which is probably the most effective under the circumstances.

The teacher and school devote their attention for a period of several weeks—perhaps half a term to about half of the subjects of the course. Then the remainder of the subjects take their place on the progromme, four days in the week, for the next period ; while the subjects upon which the pupils had bent their efforts during the preceding period are kept up by reviews and exercises—preferably on Fridays. By this plan, the interest and energy of the pupils are concentrated upon a few subjects at a time. Then, when a change of subjects, would, like a change of scene, relieve and refresh the youthful mind, new and somewhat different subjects engage their thoughts for a period. Thus every subject receives a fair amount of attention without crowding, hurry or confusion of thought.

Recently provisions have been added to the school laws to permit and encourage country districts to unite for the purpose of establishing a central school to which the children who do not live near must be conveyed at the public expense. Owing to the inertia and local jealousies of the people, however, little or no advantage has yet been taken of these provisions; indeed it is quite evident that the Board of Education will have to take the initiative before much will be accomplished in this direction.

How to retain in the work, those young men and women whose qualities of head and heart render their services of high value as teachers is a problem we have only imperfectly solved. It is true that many capable and earnest men and women have devoted their lives to the service of the public schools—notwithstanding the greater financial and social inducements of other callings. Still only a small proportion of those who qualify as teachers remain in the service long. The young men leave it for other professions or enter business life. Some of the young women also enter other callings which offer better remuneration and fewer worries; but most of them find themselves wanting in will-power sufficient to enable them to say *nay* under trying circumstances.

And yet this loss is not without its compensations, for there is no doubt that a young woman who is properly qualified for the work of a teacher ought to make an excellent wife and mother.

Under the administration of the present Chief Superintendent of Education, Dr. Inch, our High Schools have made very satisfactory progress. New High School buildings, commodious and well-furnished, have been erected in the cities and principal towns, the Provincial grants to High School teachers have been extended, the staff of teachers has been greatly strengthened and the attendance has increased rapidly. The High Schools are quite free to all candidates resident in the municipality who pass the Entrance Examination.

At the apex of our system of Public Schools is the Provincial University at Fredericton. The University of New Brunswick receives an annual grant from the Legislature. The fees are quite low and are remitted altogether in the case of the winners of county scholarships. Many of the young men, and some of the young women, who take the Normal School course, afterward attend the University, and after graduation, teach in our High and Superior Schools.

HIGHER EDUCATION

Minutes of the Higher Education Section.

WEDNESDAY, AUGUST 14TH, A. M.

After an informal address from President Goggin on ways to increase the usefulness of the Association, the section was called to order at ten a. m.

Mr. W. Packenham was called upon to read his paper entitled, "Higher Elementary Phase of Secondary Education in England."

Mr. W. J. Robertson, B.A., being absent his paper on "Modification of High School Courses Demanded by the Needs of the Time," was read by Dr. Goggin.

These papers were discussed by Messrs Walton, Stevenson, Ellis, Harstone, Strang, Henderson, Professors Squair and Young, and Dr. Goggin.

P. M.

Professor John Squair of Toronto University had for the subject of his paper "Entrance Requirements to High Schools and Universities." The paper was discussed by Mr. H. J. Strang, Prof. Young, Rev. Dr. Armstrong, Dr. W. D. Lesueur and Dr. Goggin.

John Henderson, M.A., of St. Catharines' Collegiate Institute, contributed a paper entitled, "Should Greek and Latin be retained as Subjects in our Secondary Schools." Discussion on this paper was entered into by Messrs Walton, Stevenson, Ellis, Dr. Bridges, Professor Squair and Rev. Mr. Hanna.

THURSDAY, AUGUST 15TH., A. M.

Higher Education.

"Modern Geometry," was the title of a paper read before this section by Professor N. F. Dupuis, M.A., F.R.S.C., Queen's Uni-

versity, Kingston. A discussion followed the reading of this paper in which Messrs Patterson, Harstone, Ellis, Dr. Robins and Dr. Goggin took part.

A paper on "The Teaching of History," was read by Mr. A. Stevenson, B.A., Pickering, Ont.

Mr. A. H, McDougall, B.A., read a paper on "Geometry in Secondary Schools.

FRIDAY, AUGUST 16TH, A. M.

Higher Education.

John Millar, B.A., Deputy Minister of Education for Ontario, read a paper on "The Educational Demands of Democracy."

In the absence of the writer, a paper on "The Problem of Composition," by Miss Janet Carnochan, was taken as read and ordered to be printed.

Owing to a serious illness of a member of his family, Prof. John Marshall of Queen's University, Kingston, was unable to be present. His paper on "Literature in the High School" was taken as read and ordered to be printed.

Prof. A. H. Young of Trinity University, Toronto, read a paper entitled, "What a pupil has a right to expect as the result of his High School Training in French and German."

The paper was discussed by Messrs Hay, Henderson and Campbell.

Mr. G. U. Hay, Ph. B., of St. John, N.B., read a paper on "Ecology *vs.* Morphology" or "A Study of the Life Relations of Plants."

The paper was discussed by Mr. Millar and Professor Squair.

"The Educational and Industrial Significance of the Later Developments of School Work in Kindergarten, Nature Study and Manual Training" was the title of a paper read by W. S. Ellis, B.A., Kingston.

A discussion followed in which Messrs Patterson, Millar, Henderson, Strang and Hay took part.

The election of officers resulted as follows :—

President.....Professor John Squair, B.A., Toronto.
Vice-President...W. S. Ellis, B.A., B.Sc., Kingston.
Secretary.....G. U. Hay, Ph.B., St. John, N.B.

MODIFICATION OF THE HIGH SCHOOL SYSTEM OF ONTARIO, DEMANDED BY THE NEEDS OF THE TIME.

By W. J. Robertson, B.A., Ll.B., St. Catharines, Ont.

The great problem to be solved by the educationists of Ontario, is how to adapt their system of Secondary Education to the demands of the age. Three years ago in a paper before this Association, I sketched briefly the growth of this system of Secondary Education, and incidentally made reference to some of its defects. Since that time these defects have become more pronounced, more apparent to all intelligent observers, and now, from all quarters, we hear suggestions for their removal. Perhaps the most elaborate and complete analysis of the subject has been made by Mr. Seath, High School Inspector for Ontario, in his report to the Education Department. Others, however, prominent in the educational world, have discussed these defects and proposed remedies. Unfortunately, there is no consensus of opinion as to the proper remedies, nor is there absolute agreement as to the defects. This want of harmony arises from the different standpoints of the critics. The University professor has one view, the High School Inspector another, and the Education Department a third. To a certain extent the intelligent observer, not connected directly with our educational work, takes a line of his own.

Let me endeavor to give a bird's eye view of the situation. Originally our Grammar Schools and Academies had in view the preparation of young men for professional life, law, medicine and divinity; and in addition, perhaps, the giving a thin veneer of liberal education to the sons of the leading families of the Province. Incidentally, and subsequently; some use was made of them in giving a non-professional training to would-be teachers. But the popularization of these schools, brought about by throwing the doors open to all classes, girls as well as boys, caused a radical change in their aims and administration. A new feature that came into view very

prominently, was the facility these schools afforded for preparing candidates for the teaching profession. Where hundreds were educated for the University Matriculation examination, thousands now were prepared for the different grades of teachers' certificates. Of course, it is not implied that all the pupils at these schools had in view the so-called professions, or teachers' certificates. No doubt, the majority of students never reached, or wished to reach, any of these goals. They took such an education as was furnished them ; but their needs were not seriously considered ; what counted was how many candidates passed the University matriculation and the teachers' certificates examination. A good general preparation for commercial life and intelligent citizenship was never before the mental horizon of either teacher or trustee. The standing of the school, for a time, depended on how many pupils passed these examinations. But it became apparent that much time and effort was being wasted by maintaining different curricula and standards for matriculation and for teachers' certificates ; and the outcome of the realization of this fact was the unification of the courses of study required for these examinations. No doubt this was a great boon to the teachers in our High Schools and Collegiate Institutes. For a time, too, it caused a marked increase in the number of matriculants, and, it certainly raised the standard of matriculation. Then a reaction set in ; the standard of teachers' certificates, it was claimed, was too high for matriculation, and the energies of the authorities of the University were bent to moulding the course for teachers' certificates to meet the needs of the University. Languages were made compulsory, Mathematics were degraded—not that the would-be teacher required these adaptations ; but, inasmuch as there was but one examination for matriculation and teachers' certificates, it became very desirable to those who were anxious to attract students to University halls to make this examination serve not the needs of the teacher but those of the University. But the inevitable happened. The cry was soon raised that teachers were not getting enough Arithmetic and Grammar for the proper discharge of their duties, and, next, appeared the thin edge of the wedge which threatens to divorce the union for many years existing between the University and the Education Department. Very recently the first step of what probably may be many steps was taken in the direction of separation. Once more Arithmetic and Grammar are given special prominence in the curriculum of the teacher. The whole tendency, too, just now is to make matricula-

tion as easy as possible ; and it requires no prophet to foresee that the Universities are going to revert back to the policies of other days and have their own curricula, and their own examination regardless of the policy of the Education Department. Another illustration of the fact that in educational matters we are inclined to travel in a circle.

In the meantime it has begun to dawn upon the public mind that our Secondary Schools are not called into existence merely to educate a small percentage of our youth for the professions. The majority of the pupils who attend these schools must preforce make a living by other means, and some consideration is due the tax-payers whose children are destined for a commercial or industrial life. This fact, together with the broader principle, that first and foremost every boy or girl should be as well equipped as possible for the battle of life, and for the exercise of the studies of citizenship, has led to the very reasonable demand that provision should be made in our High School curriculum for a good general education—one adopted to the needs of those intending to engage in commercial or industrial occupations. Now these various ideals, it is supposed, can be realized in the same school. At least, an effort is now being made to have taught efficiently, not only the course required for matriculation and teachers' certificates, but also the subjects necessary for the boy or girl who intends to make a living by commercial occupations. Still later, an agitation has been started, and one which has gained a foothold in a few localities, to have what is called an industrial or semi-technical education given in our High Schools and Collegiate Institutes. Summing up these accumulating demands we see that at least five more or less different courses of education are proposed to be given in our Secondary Schools.

In spite of the fact that it is possible to harmonize some portions of these different courses, it is quite evident that very few of our Secondary Schools can afford an equipment which will carry them out successfully. This remark applies with peculiar force to a course of Industrial education. The appliances, the raw material, the trained expert, all needed for such a course, involve an expenditure beyond the resources of all but the most wealthy centres of population.

To me, then, the crux of our secondary system of education lies in this gradual loading of our Secondary Schools with a multiplicity of courses of study, entirely beyond their strength, and thus making work accomplished inefficient and superficial. It may be said

the solution of the problem is an easy one—all you have to do is unload. Practical difficulties, however, stand in the way of this simple solution. Every educationist recognizes we should have all the courses of study just mentioned, and ever one who calmly considers the situation also recognizes that no single institution in the great majority of our towns and cities, can afford to give them all. Why not then, it may be asked, establish different institutions capable of supplying these demands? Let there be a certain number of schools which will make their chief aim to prepare pupils for entrance to the Colleges and Universities. Let there be a larger number organized and equipped for preparing candidates for certificates, and capable also of giving a good general and commercial education. And lastly let us have a few thoroughly manned and equipped technical schools where a good industrial education can be obtained. So much by way of theory. What are the objections? Ask any of the ratepayers in our smaller towns if they are prepared to abolish their High School, or prepared to have their High School give up the teaching of Latin, Greek, French and German, in order that the energies of their teachers may be wholly devoted to those subjects necessary for a good English education? At once you will meet with the reply, "I cannot afford to send my children to the nearest Collegiate Institute in order to get a knowledge of Classics and Moderns. I wish my son to go into a profession; to do that he must matriculate; and to matriculate he must be taught, and I wish to have him taught here, near my home, where the expense will be light, and where I can look after him personally." From this parent's point of view, it is money in his pocket to maintain a two or three master school, which will make the attempt to teach everything on the curriculm. Of course, the attempt is a failure. No subject is properly taught, but that is no argument to those ratepayers who have sons and daughters who wish to obtain an education beyond what the Public School can give. All over Ontario such schools have been called into existence; and the problem is how to confine their work to limits in which they can operate effectively. Political perils "stand thick thro' all the ground" should any attempt be made by the Education Department to circumscribe their sphere of action. Not only the smaller High Schools thus attempt the impossible. Few, if any of our Collegiate Institutes are adequately equipped for the task placed upon their shoulders. The whole difficulty arises from the fact that our people are not prepared to make the financial sacrifice necessary to maintain our sec-

ondary schools in an efficient condition. No one should bring a stern indictment against the people of Ontario on that account. They have done wonderfully well during the last thirty years, and we may confidently anticipate a great advance during the next thirty. All that can be done at the present time, however, is to bear our ills, and lessen their influence as much as possible. The Education Department should prevent the establishing of further new and weak High Schools; it should not expect the existing High Schools to undertake additional work, such as is involved in giving an efficient Industrial education. Still further, the weaker schools should be discouraged from attempting to teach the whole course of study involved in the Matriculation and Junior Leaving examination. Greater stress, too, should be placed upon the fact that the best work our High Schools can do is to give our boys and girls a good sound education that will fit them for the discharge of the duties of life. No doubt there are many in our larger centres of population who would not be satisfied with such an education for their children. But our High Schools cannot undertake to satisfy the demand for educational luxuries—if they can give good, solid mental food, useful for all kinds and conditions of pupils—that ought to suffice. Let those requiring luxuries pay for them—not the ordinary taxpayer. And here I may note that this demand for educational luxuries is exhibiting itself in a very marked manner. Private schools, church schools, schools established by stock companies, are multiplying, and are increasingly patronized in our larger and wealthier centres of population. This tendency to pass by the High School and Collegiate Institute, in favor of schools not under Government control is likely to become more marked as wealth and social distinctions increase. Parents, too, not at all influenced by social distinctions, are often induced to send their sons and daughters to these voluntary schools for other reasons. The pressure in the High School is, too often, extreme. The everlasting cram and grind in order to pass the different prescribed examinations is not only physically but mentally hurtful to the less robust pupil. The evil of too many examinations has at last become apparent to the Education Department and it is safe to say that steps will soon be taken to mitigate their severity. But alas, it will be no light matter to remove the blighting effects of this examination craze. Its roots are down so deep in our educational soil that it will demand years of patient effort to eradicate the evils arising from the introduction of false ideals of education. When

one thinks of the misdirected energies of teachers and pupils during the last quarter century, in order to meet the demands of this Moloch upon whose altar so many gifted men and women have been sacrificed, one is tempted to ask what malignant influence controlled the educational policy of Ontario. Not that the examination system was evil, and that continually; good undoubtedly came from it. A high standard was frequently reached in some subjets of study; thoroughness, too, of a kind was attained in certain lines—at a cost, almost always of breadth and culture. But what is now generally recognized is that the system was carried to excess—that false ideals of education were held up before teachers, pupils and parents, until the one end always in view in a multitude of schools was how many pupils can be passed. To reach that end every nerve was strained. Every pupil possible was pushed into the list of candidates, and all right educational methods thrown to the winds, all ideas of moulding the character and directing the energies of the student into right channels utterly disregarded. Do not blame the teacher, do not blame the pupil, do not blame the parents and trustees—blame the false ideals gradually insinuated into our social and educational life. To appreciate fully how deep the roots have been struck, one must know how many thousands have written this summer on Leaving and Matriculating papers—thousands, too, who probably never expect to teach, enter the Universities, or practice one of the professions. One too, should know how difficult it is now to return to a rational system of education. To leave a subject of study without an examination value is to abandon that subject to almost absolute neglect. In spite however, of the fact that we have wandered far from the right path, we must make strenuous efforts to return. That we are going to return to it, I have no doubt. The danger is the pendulum will swing too far in the opposite direction, so that the true function of examinations may be overlooked, or forgotten; and instead of having to many and too strict examinations we shall have too easy and too few tests of scholarship. We all know examinations have their value, and it would be utter folly to disregard them. But in human fashion we have gone to excess, and have not practiced the virtue which lies in grasping and retaining the happy mean between extremes.

I am conscious in looking over what I have written that I have not adhered very closely to the text assigned me for this paper. But what Ontario needs is not so much a modification of courses of study

as the teaching of these courses in institutions specially adapted for the work. The impression I would leave on your minds is that all the courses of study now attempted or suggested, are valuable and necessary, but that it is practically impossible to teach them successfully in the ordinary High School and Collegiate Institute, with the equipment and staff available. The Universities certainly need schools where a proper training in languages can be obtained at a sufficiently early age; the teaching profession demands proper training schools where a thorough grounding in the essentials of a good English education can be had; the average parent wants a school where his boy or girl can get something better, and higher, than what is furnished by the Public School; and lastly, the demand for the education of the eye, the hand, the muscle, the nerve, which is needed to make the good mechanic or engineer is one which must very soon be met. The problem can be worked out in one way, and in one way only. A differentiation in our secondary school system must take place. That however, is a work of time, and we cannot expect to see all we would like to see at once. In the meantime we should aim at a rational system, in which the excessive value given to certain studies in the past will cease. Freer play is demanded for the exercise of the skill of the wise teacher; and that will never be attained until less value is given to written examinations, and less time given by the authorities of the Education Department to programme making. The whole profession of teaching in Ontario groans under the burden of a worse than Egyptian taskmaster. It is utterly weary of the perpetual tinkering with the courses of study. No one seems to be anxious to claim the parentage of these dismal changes—yet they are made. One sighs for the freedom, the crudeness, if you like, of the course of study of his early days. No doubt we are now more thoroughly organized—no doubt that more young people are getting a smattering of higher education; but one may reasonably doubt whether the educational factory of to-day turns out the men, men of thought, breadth and depth, men with a grasp of life and its affairs, that were the product of our schools and colleges fifty, forty or thirty years ago. Yet I have faith in the future, faith to believe that the benfits of our secondary schools will soon be within the reach of the most of our children, instead of being confined to a small percentage as in the past, and to a certain extent, as in

the present. I believe that the High School, or its equivalent, will become more and more the "poor man's college" fitting and preparing his children for the work of life, and fitting them immeasurably in the scale of intelligence.

THE EDUCATIONAL DEMANDS OF DEMOCRACY.

By John Millar, Esq., B. A.
[Deputy Minister of Education for Ontario.]

When the brotherhood of the race was proclaimed, there dawned upon the world a new civilization. Equality in its proper sense is the foundation of Democracy, and equal rights are imperfectly understood where Christianity does not hold sway. Doubtless government by the people received much attention among the classical nations of antiquity. Aristotle had such a deep insight into the needs of man as a social being, that his political conceptions are invaluable to the educationist as well as to the statesman. It is a fact, nevertheless, that in every Greek republic the labouring classes were slaves. The profound theories of Plato and the laws of Lycurgus show how greatly the ancient world had need of light.

Greece in its most illustrious times was governed by an oligarchy. Rome in its brightest period had little regard for the enslaved masses. The history of nations during the Middle Ages, and the conditions in Continental Europe to-day, prove how slow even people professing Christianity are to recognize the common Fatherhood of God. The great principles of modern Democracy have, however, made progress. The overthrow of the Stuarts in England, the American Revolution, the Reform Bill of 1832, and the Civil War in the United States are land marks to encourage those who have faith in the progress of civilization.

We have rightly come to have an instinctive faith in the permanency of democratic institutions. The absence of such faith would be indicative of national decay. When we are asked to give reasons for believing that British power will be more enduring than that which dominated the world in any previous period, we are dismayed at the resources the older governments possessed. Their achieve-

ments did not, however, win for them stability or perpetuity. Athens for example had an art, a literature, and a philosophy, which have proved themselves immortal. Its sculpture and architecture are supreme in excellence. Philosophers, poets and statesmen in nations unborn when Greece was in her prime, receive inspiration and guidance from the literature of Athens. Art and Literature are among the greater achievements of the human race, and yet they cannot of themselves safeguard the nation.

Forceful national qualities have also their advantages, but they did not save Rome from decay. Its great system of jurisprudence, which forms the basis of the public laws of nearly the entire civilized world, did not give durability to a powerful commonwealth. The Roman army has never been equalled as a fighting or a colonizing force, and yet military power had much to do with the destruction of the Republic and the decline and fall of the Empire. Rome also teaches conclusively by its transportation system, its aqueducts, its bridges, its temples and its palaces, that magnitude and splendor of public works have no tendency to guarantee national permanence. The Italian Republics are also not without their lessons. Venice, with its architecture of wonderful beauty, its art in painting, which holds still its prominence, its widespread commerce, which gave its citizens dignity, wealth, power and splendour, provided no security for the perpetuity of the state.

It would be a mistake to suppose that the power of religious enthusiasm can be relied on to give security to national institutions. The extraordinary vitality and persistence of the Hebrew religion did not give permanence to Judea. Moslem religious enthusiasm carried Arabic civilization through Africa into Spain, but this concentrated religious zeal did not save from destruction the cause which it championed. The history of Christian nations points to similar conclusions. More than once we are taught that zeal without knowledge may bring destruction. Spain, for example, had a united and fervent enthusiasm, but its once pre-eminent position in Europe is gone. It has languished, retrograded and lost its place among the leaders of civilization. It is not necessary to refer to the religious zeal of the first settlers of this Continent. Every reader of Parkman must admire the self-sacrificing determination of the Jesuits, but the Jesuits have never given permanence to systems of government. Too much importance is often assigned to the religious enthusiasm of the Pilgrim Fathers who landed on Plymouth Rock.

Had not broader views and higher ideals taken possession of the people, the zeal alone of the early New Englanders might have made the history of Massachusetts not different in some respects from that of South Africa. A reference to the Boers affords much argument for this contention.

Splendid arts, noble literatures, extensive commerce, magnificent structures, strong and well-disciplined armies, and burning religious zeal have, therefore, not saved nations from decay and ruin. We have no reason to hope that the general diffusion of physical comforts, or the spread of material prosperity, will save the nation. Any diffusion of wealth which would make a people lazy, selfish, or sensual, has a deteriorating influence on nationality. The motives, affections, and passions of the people must be improved before any reliance can be placed on the power of a better physical well-being to become a source of public security. It is just here that many so-called reformers make a fundamental blunder. Improvement must come from within. This is the teaching of Christianity. This is the doctrine of true Democracy. This is a principle of Education which must be maintained. The socialist too often calls for legislation. The citizens are urged to control their representatives, while self-control is ten times more valuable to the state.

If the teaching of Christianity meets all human needs, there should be no misgivings regarding the future of our present civilization. Decay of the great nations of the past was due to a departure from sound ethical teachings. It is the task of Christian democracy to secure every individual his right, and to realize for any individual his worth. With Him, who said "even the very hairs of your head are all numbered" every person is of incalculable value. Christianity makes every man a member of the Kingdom of God. Democracy makes every man a citizen. How best to discharge his duties to the state, is the constant aim of each person who believes that "no one liveth to himself." "Ye are all members one of another" is as true to-day as in the time of the great Apostle of the Gentiles. Regarded as citizens, or as children of God, all men are essentially equal. A common loyalty is demanded of all. Christianity stands for the immortal worth of all men; all are the children of the same family. Democracy, like the Gospel, aims to bring all persons equally to their right and worth. The perpetuation of artificial class distinctions is as foreign to the genius of true democracy, as it is to Christianity. It should be remembered, however, that both Christianity and

Democracy emphasize the variety of human endowments and functions, while they call for mutual co-operation. Democracy brings the strong into the service of the weak, and thus the lowest may be raised to a higher position. It dethrones an aristocracy which exists only to exact the service and homage of the weak. It retains in power an aristocracy composed of the best elements of society. Indeed, true democracy will always be governed by true aristocracy. Christian democracy always impresses the best talents into the service of the state. Guided by conscience and enlightenment, it would not, and it could not, do away with the distinctions of great and less, which become more marked as society advances. No person is excused for doing his best, however, little. All men are not created equal notwithstanding what is stated in the American Declaration of Independence. People are not equal in physical powers, in intellectual endowments, or in energy. Those who speak of men being created equal, forget the distinctions of race and the varieties to be found even in the same family. They ignore the acknowledged facts of evolution and the laws of heredity. It is only in a savage state of society that men display few inequalities. As mankind advances differences become greater. In more highly civilized nations there is less approach to political, economic, social and intellectual equality. It should be accepted that inequally has been the condition of progress. A state of equality, if such were possible, would be a state of stagnation and a return to savagery. The theories of Bellamy are opposed to the first principles of man's social relations. The man with one talent and the man with ten talents will become more and more widely separated in their acquirements, if they make equal use of their opportunities. A larger co-operation and the constant betterment of all classes will, however, be the result. Educational processes encourage individuality; and it should be a main object to enable persons of character, ability and energy to find or make opportunities by which they may rise to their proper level in the economic, professional or political scale. The same enjoyments and positions are not possible to all, because God has made men unlike. Improvement is, however, within everyone's reach. Each one should know what he can do, and what he may be, and strive for that with all his might.

Democracy demands a wide diffusion of political intelligence. When the divine right of kings had sway, the ignorance of the masses was possible. The basis of sovereignty has so widened that

there is danger in allowing even a small section of the community to remain uneducated. According to Herbert Spencer, education is the preparation for complete living, and under our system of government, as everyone is expected to live with his fellows, fitness so to live is necessary. Only in community life is the highest type of of individual life to be found. Education for the state demands the education of the individual. Participation in the public service should be regarded by every person as a duty and a privilege. There is danger to democratic institutions when the educated classes allow ignorant people to rule. The best way to purify politics is for each party to drive out its bad elements. Politics should attract the highest intelligence of the nation. If our educated men, I do not mean scholars, are not the leaders in politics, so much the worse for the nation.

The inculcation of patriotism is good, and there are times when patriotism may be best shown by singing "God Save the King" or by placing a flag on the school-house. It should not be forgotten, however, that instruction in civil government should not be limited to devices that lie merely on the surface. A thoroughly instructed and competent public opinion on national questions, calls for the best effort of teachers. Much of the disinclination to engage in active political life is due to the evil effects of treating public office as a reward for partisan activity. To turn over the care of great public interests to the camp-followers of a politician, looks like a return of barbarism. That a man is pulling the wires, in order to be appointed to a government position, should be conclusive evidence that no government is justified in appointing him. When our education becomes what it should be, it will lay proper emphasis on individual responsibility, and it will promote a patiotism that reaches farther than jingoism, drumbeating or flag-raising.

Education should inculcate the essential unity of all classes. In this way Democracy will be benefited by the endless diversity of function, capacity and achiement among individuals. The elevation of the masses should be a fundamental object of education in a democracy. All civilizing agencies should tend to benefit the poor, to elevate the down-trodden and to restore the wicked. Democratic education, like Christianity, should be primarily interested in those who need help. Every useful faculty, which any member of the community possesses, should be utilized for the benefit of society. On this continent the danger which confronts us is not aristocracy

(1) Special High Schools might be established for the study of the languages, to which pupils might be admitted at an early age without examination.

(2) The study of the languages might be begun in the third or fourth forms of Public Schools.

(3) Preparatory forms might be instituted in High Schools, to which young pupils might be admitted.

(4) The entrance examination to High Schools might be made easier.

The first of these plans presents more serious difficulties than the others, and so, for the present, we may pass it by without discussion. The other three are more clearly within the limits of the practicable, and all might be introduced simultaneously, for they would not be mutually inconsistent.

The second plan, that of beginning the languages in the third and fourth forms of the Public Schools, would confer a great boon on villages and small towns where there are no High Schools. Within the last year or two several parents residing in small villages have complained to me of the difficulties they experience in getting such education as they desire for their children. They cannot get Latin and French in the Public School at home, and the High School in a neighbouring town is too distant for their children to attend without leaving the parental roof. So, precious time is lost waiting till the boy or girl is old enough to go away from home. The difficulties in the way are that the schools would be a little more expensive, and that we have not a body of Public School teachers competent to do the work. The first of these difficulties is not a serious one, and the second would be removed in a few years' time. Our High Schools would soon provide a class of teachers able to discharge such duties as would be demanded of them in this respect.

Regarding the third plan, namely, that of providing preparatory classes in High Schools for such as desire to begin their languages early, I can see no objection to it except that it might cost a little, but I cannot think of any harm being done by allowing School Boards in towns and cities to have the power to organize such classes for those who are willing to pay for them.

The fourth plan should be one of the widest application and if carried far enough perhaps the most effective in giving relief. If I were asked to fix the subjects for a High School Entrance Examination I should consider the following subjects only as necessary:

education would be better served by leaving them to secure, by their own efforts, means to obtain secondary or higher education. It is strange to find that rich men seldom act on this principle regarding the education of their own children. They know full well that unless young persons attend a High School at a certain age, they will never secure the advantages of secondary education. To the honour of the American nation, free High schools have become almost universal, and the most progressive states are those in which the best facilities are provided for secondary education. Scotland has long been famous for its appreciation of educational advantages. The princely gifts of Andrew Carnegie to the Universities of Scotland, show how well a shrewd business man understands the advantages of free education.

England is now passing through a struggle, regarding secondary education, which reminds one of the bitterness preceding the passage of Mr. Foster's Bill of 1870. The now celebrated Cockerton case has placed England in a perfect ferment. The judicial decision, which would deprive School Boards of the privileges of maintaining higher grade schools and continuation classes, as they have been doing for some years past, would appear to be the "beginning of the end." Never before were the masses of the people so greatly aroused, and it has only been by concession after concession that the Government, with its immense majority, has been able to satisfy its friends. It is safe to believe that the rights of the people will triumph, and that School Boards will eventually secure full freedom in providing, at the public expense, if the locality so desires, free secondary education, as it now does free elementary education.

To Canada the situation in England and in the United States has its lessons. "Down by the sea" the people have, with commendable intelligence, followed the policy of New England in having free High Schools. In Ontario, the wealthiest province of the Dominion, freedom is given to localities to have free High Schools if thought advisable. Unfortunately in many cities and towns the wealthier classes have opposed the abolition of fees. Brighter days are, however, dawning. In many localities free High Schools prevail. The city of Toronto has done away with fees in the First Forms of its Collegiate Institutes, and it may be hoped the time is not far distant when the intelligent province of Ontario will yield to the democratic spirit of the age in having every High School and Collegiate Institute free to resident pupils.

Under modern views of citizenship the work of universities must be brought into touch with the masses of the people. The courses of study must be adapted to the requirements of the present day. Sectarian colleges are not suited to the liberal religious views of our times. Old institutions like those of Oxford and Cambridge, are now wide open to dissenters. The German Universities make no distinction between Catholic and Lutheran, and the American Universities are noted for their freedom from denominational restrictions. From the views here set forth the atmosphere of a University must, however, be Christian as well as democratic. It must be accessible to all classes, and it is unfortunate that in many cases, although religious tests have disappeared, money tests are still a bar to admission. Very often the wealthier an institution becomes, the higher the fees for students. If a University is accessible only to the wealthy it does not deserve the name of a state institution. Higher institutions of learning are worth more to the state than they cost. When there is such rage for wealth every patriot should urge such a University policy as will reach the people.

Democracy should emphasize moral training in all educational efforts. Too often it is assumed that knowledge and education are identical. Growth in morals has not kept pace with growth in knowledge. In spite of much ethical progress, every day brings to notice instances of intemperance, dishonesty and untruthfulness. In public life charges of corruption, bribery and intimidation are too prevalent. It should be settled that high moral principle is essential for every public position. France is a powerful illustration of the evils that result from exalting the intellectual at the expense of the moral element in education. Domestic life should be carefully guarded. In every home the flame of patriotism, of purity, of righteousness, and of the higher life, should be fed constantly by parents. We have no guarantee of the permanency of democracy unless the doctrines set forth in the "Sermon on the Mount" are maintained. The avenues for prominence in social, industrial and political positions should be closed to men not noted for rectitude. High qualifications, not simply in scholarship but in power to mould character, should be demanded of teachers. Scholarship, without moral power, should qualify for no University professorship. Teachers should become leaders in every movement that has for its object the moral elevation of the people.

The opinion here mentioned, and the end to be obtained, may appear high. It should be understood, however, that only with a standard of this kind can our system of government acquire stability. Unless democracy is guided by Christian principles, our boasted civilization must, like that of the nations of antiquity, pass away. No progress in mere intelligence, and no zeal for Imperialism, can save us from the fate of other great nations. No patriotism is worthy of the name which rests upon any platform lower than the one proclaimed nearly two thousand years ago by the Founder of Christian civilization. Puritanism, and not military success is the force which has made the British nation what it is to-day. Puritanism is characteristic of the best elements in both the Roman Catholic and the Protestant churches. As thus understood Puritanism is the salt of Democracy.

The future of Democracy is, however, hopeful. The press and the pulpit are powerful agencies for righteousness. The taste for good literature is improving. The danger of an ignorant electorate is demanding better educational facilities. An election campaign, though it exposes much that is bad, develops intelligence and character. Party managers are beginning to see the wisdom of putting in the field candidates of unsullied reputation. The platforms of both parties differs much less than formerly. The question for the electorate is becoming a choice of men, rather than a choice of measures. If righteousness counts, we need have no fear of the out-look. If we believe in God, we should believe in men.

EDUCATIONAL SIGNIFICANCE OF KINDERGARTEN, NATURE STUDY AND MANUAL TRAINING.

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To be able to properly value any new movement of a social character, especially if it be wide extended, one has to take account of preceding and accompanying conditions. If he can thus estimate the causal elements at their proper worth, he is in a position to judge regarding the effects that may reasonably be looked for. In our

complex civilization with its interlacing connections, no one event stands apart from others, and that is particularly the case with any phenomenon covering a wide area and affecting many nations. The phase of modern education which has been assigned to me for discussion belongs to this class of subjects, for it is the latest appearing and least developed branch of that great social and industrial revolution, which during the last half century has grown to such enormous proportions that it takes rank with the great world movements of past times, whether of conquest or religion or civilizing influence.

Politically it is a long way from the first Reform Bill to the practically universal suffrage of Anglo-Saxondom of to-day, yet the life of a single man who need not have over gone the Psalmist's three score and ten years covers the entire period. The same man will have seen the telegraph advance from the first signals of Morse and Siemens to those of Marconi, the stage coach develop into the express train with ten times the speed and a hundred times the capacity, the freighter's waggon give way to the giant Mogul that in time and power and capacity does the work of ten thousand wagons; the sailing craft of a few hundred tons, the toy of wind and wave, yield to ocean liner; but at the same time he will have seen the tradesman's shop grow into the great factory, and the necessary accompaniment of that, the artizan and skilled workman with their apprentice systems give place to the wonderful structural and mechanical contrivances that make these other advances possible. In his seventy years, he will have seen commerce and manufactures increase a hundredfold, and centres of industry and trade spring up by the score where hitherto there had been no dream of their existence. As a result of all this, I think one can safely say that no two centuries of the world's previous history has witnessed through all civilization, any such national advancement, any such growth of personal freedom, any such general individual prosperity as the thirty-five years since the close of the civil war in the United States has brought about. But the really important element of it for our consideration to-day is that the planes of equal prosperity and freedom have been tending downward until these that formerly marked the leisurely and well-to-do people have reached the wage-earning and industrial classes, thus producing for the great mass of the people new conditions and surroundings, and these not only as they relate to physical conveniences and comforts, but to the refinements, the pleasures and the intellectual side of life as well.

It seems clear that any great wave of this kind that sweeps through the economic and industrial world and thus affects the life of the whole people, especially when it carries with it a large measure of national prosperity must be accompanied by a corresponding increase of intellectual vigor and activity, else civilization, according to our standards, is a failure, and a lapse from progress is inevitable. In the present movement there is no indication of mental stagnation, because there is no subject upon which the whole civilized world is in such complete apparent accord at the present time as it is upon the necessity for educating the young.

Development along educational lines has been slower than in the directions of industrial and economic progress for various reasons. There was thrown upon the schools, particularly in English speaking countries, a labor that they were unable to perform efficiently. This inability arose partly from lack of means for handling the increased mass of material, but more from lack of adaptability to the new requirements. Mental power is slow of growth, and cannot be so immediately altered to meet new conditions as can the material of the physical world. The laws of educational progress and the whole science relating to the mental growth of children had to be studied and formulated with but few men competent to do the work. Schools and schoolmen are essentially conservative so that new methods and new subjects have generally to demonstrate their right to existence before they will receive adoption as reforms.

The efforts made for educational progress in connection with this wave of general advancement have been chiefly along two lines, (1) the carrying on of school work in accordance with the stages of the mental growth of the normal child ; (2) the discarding of a large portion of the old routine book recitation and the substituting for them lessons and methods relating to observational and constructive work. Pressure tending to bring about these changes came from two entirely different sources, and with two entirely different objects in view. On the one hand, educators who had attempted to work out the order of mental development of the child and to formulate the principles of that growth claimed for the newly proposed subjects an important place in the schools because of their influence in the gaining of mental power. On the other hand, men of keen intellect, trained in the ordinary affairs of life were impressed by the failure of the elementary school systems to give any adequate preparation for

the duties that boys and girls would be called upon to perform at later periods of their lives, and enquired if there could not be introduced into these schools subjects and methods that would have a more direct relation to the after careers of the pupils. Thus the movements from these sources tended toward a point of junction from which we are watching its progress with increased energy at the present time.

It does not seem to be a overstatement of the case to say that in this country there is practically no public opinion about school work and methods. Parents send their children to the classes to do and learn as they themselves did and learned a generation ago, all regardless of changes in ideas, in methods, in knowledge of the human mind and in educational agencies within these passing years. It therefore rests with the educators of the country,—and by educators I do not at all mean the school teachers—to work out the problem so that by employing the best agencies the greatest mental advancement of the children may be brought about.

The principles that underlie the use of effective processes have been formulated for us in recent years by those who have studied the lessons from the great masters of the past and who have investigated the order and intensity of the mental development. Most of them are well known, at least from books, so it only remains to show their application in the present case.

There will probably be no disagreement from the proposition that in the case of subjects whose educational values are approximately equal those should be chosen for school work that most nearly agree with the natural inclinations and employments of the normal child; that is, the exercises should be suited to the stage of the mind's advancement and should be such that they will furnish their own incentive to action without making demands, in the form of constant voluntary attention, upon the energy of both teacher and pupil. This, of course to, some extents conflict with the doctrine that school is a place of discipline in preparation for the battle of life, and the duties of life for most of us do not lie along the paths of pleasure but in much more rugged places. The answer to that is, for persons of mature years there is always an ulterior object striven for, and in that object the sense of enjoyment either present or anticipated outweighs the pain of the performance, else the labor would not be carried through. The argument from the ...d in maturity to the childish one does not hold good, because

they are differently constituted in this respect. In our junior classes we cannot appeal very much to sense of duty, scarcely at all to anticipated pleasures on the mental side, and but slightly to those of a physical character, as an inducement to work, so that with the employment of every incentive within reason for voluntary labor, there still is ample opportunity for efforts of a disciplinary character. The possibility of making school life pleasant and interesting to the children is not the only consideration that must be taken into account; there is also the problem of making it effective. We know that in the immature mind the origin of the ideas is entirely sensory. The child becomes acquainted with things through the medium of the senses and through that medium alone. For him no new conception is possible that does not arise through sensation, or through association with some object already known by that means. The non-sensory is to him simply non-existent and the ability that comes with adolescence to deal somewhat with the abstract has its origin in ideas of the concrete. The teacher, for instance, endeavours to convey to the boy his first conception of a molecule as centre of forces, by using the illustration of balls connected by stretched elastic strings and all decreasing in dimensions until they pass beyond the range of visibility; and I suppose there is no poetic image, however refined or ethereal, that is not translated into a concrete representation in the mind of the reader, but every reader has his own variation dependent on some conception already existent in that mind. In popular language and in former days we spoke of this as "Being the unknown upon the known." Modern psychology has given a more scientific explanation under the term *Association*; and whatever theory we may adopt in explanation, the fact remains unaltered that thought does not originate *per se* but starts from something already stored amid the brain cells; and what we call the new in mental action is but an added branch—an extension of the old. As Prof. James puts it "whatever appears in the mind is the associate of something already there." It therefore should be a basal principle that the educational process should keep storing the mind of the pupil, especially in early years, with the thought-producing material and at the same time try to induce a thought-producing condition of that mind by making the greatest amount of association of this material so that there may be the widest range of distribution of nerve currents amid the centres.

If then we are to adopt these two principles that in the mental

training of children it is desirable to follow lines of least resistance, so far as this can be done without sacrifice of educational efficiency; and to store the mind with the largest number of conceptions and their associations we have to seek for processes by which the required end may be accomplished. This involves a consideration of two factors—the child that is to be trained and the school work by which that training is to be effected.

There are two aspects under which the child, as an educational unit may be viewed. He may be looked upon as an individual, one of a good crowd :—in this province, for instance of half a million—all subjects to similar impulses and influences, all to be restrained and guided by the same rules, all with similiarly endowed minds that are to be cultivated and strengthened by the same processes, the same treatment, and the same studies. That is the view, and that the practice which has prevailed with us in the past in regard to childhood. On the other hand the child may be looked upon as a bundle of tendencies and aptitudes that "all the past of time" has been building up ; and every tendency and every aptitude is capable of adaptation and guidance under proper treatment. This is the view that is becoming more prevalent as time goes on, and will more and more mould educational work with us.

It is a well known biological fact that former race characteristics are likely to be reproduced in modified form in the individuals of after generations, especially in their immature years ; and doubtless the pupils in our schools owe many of their tendencies, especially those that are of somewhat general occurrence to former race conditions. For instance, boyish destructiveness, on the one hand, and boyish hoarding on the other, may easily be part of the common inheritance from that period in our development when food and fighting power were the two great factors of safety and existence for the man and the tribe. Add to the race bequeathments the peculiar heritages from long lines of ancestors, the differences in the mental characteristics of the sexes, and the fact that tastes and tendencies alter with age ; then one begins to appreciate the difficulty of the problem that faces the educator when he attempts to develop the means by which each child may be best adapted for meeting life's necessities and duties.

In regard to the primary and secondary school, I think the view will have to be abandoned that they exist for the production of intellectual refinement and that mental condition known as culture.

That educational ideal has come down to us from times when such schools exist for the leisure class, who could afford to indulge in the luxury of a liberal education, because they had no need to make provision for earning a living, or at worst that came in the professional school after the university course. Now the conditions are altered. These schools are used by pupils who with but few exceptions, finish their education in them. In Ontario, ninety-nine children out of every hundred do not go beyond the high school and nine out of every ten of these stop with the public school course. With the new surroundings of material expansion, and the consequent demands for mental training that have been referred to, it becomes necessary for us, to provide such courses of study as will give to the young men and women of the country a symmetrical, an educative and a practical outfitting for after life. Symmetrical in that it may develop regularly and equally the powers of mind and body as a whole, not simply literary faculty, mathematical ability or mechanical ingenuity. Educative in that it shall induce accurate observation, correct reasoning and good judgement with control of both mental and bodily powers, and the acquisition of that knowledge requisite for intelligently taking part in the duties that the social community requires. Practical in that the studies and methods employed, and the knowledge and facilty gained, shall all bear relation to the life beyond the school-room, and shall bear on the problem of making a livelihood, Some one has written that there are three ways in which we can get a living in this world, and only three, by begging, by stealing, or by working. When one examines into the foundation for life that is sometimes laid in schools, he wonders which of the three callings the pupils will be best fitted to follow when their education has been finished.

If these be even approximately right, that every child has its inherited tendencies, that the sum of these tendencies determines its character and the resultant action its behaviour ; and that the work of the school should so cultivate, broaden and strengthen the mental powers that they may control, modify and guide these tendencies to take effect in lines of conduct that will make for the highest good both of the individual and of the community of which he is a member ; then the problem for the educator is to desire the means for this adaptation. Under the older *regime* the child was taken from his play and employments and the surroundings in which he was interested, and placed in classes with books, recitations and compul-

sion as the agencies employed for his education, while examination marks built up the measure of his success. Barring the importance of the examination record these means must still be employed as an essential part of a successful system, but they are only a part, for there are other elements that enter into the newer educational processes. These are based on what is popularly referred to as the games and plays of children. It may be pointed out, however, that this is a misuse of words. The boy with his blocks building and rebuilding his castles, by the hour, is just as intently engaged, and relatively for age, just as deep in thought about it as will be the man twenty years later busy planning his home ; and the girl matching her ribbon ends for doll's clothing is as importantly busy as is the woman amid her dresses and millinery. Similarly the crude beginnings of observations and collections among bird's nests, pebbles and flowers shows the faculty which if properly trained develops into that of the scientific investigatorr These illustrate the working of the minds of children which formerly were ignored in scholastic methods but which latter efforts are endeavouring to utilize.

The ideal educational system would be that in which the peculiarities of every child in the way of mental endowments and tendencies would be separately studied and dealt with. In schools, this is manifestly impossible, so selections have been made from excrcises that are likely to be generally interesting, and that by proper treatment can be made disciplinary, and strengthing to the mental powers. Of course these vary with the age and advancement of the pupils. In the earlier stages we name it Kindergarten, but it soon develops into two parallel branches,—Nature Study and Construction Work.

To guard against any error here, it may be again pointed out that the introduction of this class of school exercise is an educational movement in response to a legitimate demand for improvement in methods, and that it is not a mere spasmodic effort, nor a temporary addition to the curriculum like an extra text in literature or a book of Euclid.

At the same time this reform is not a revolution, no matter what may be the claims of enthusiasts who, without knowledge of the problems involved, exploit their own particular hobbies, each as the cure all of every complaint that can be called into service for the purpose of being remedied. No educator who knows from sober and

wide study the unsolved questions of his profession looks for anything other than a gradual improvement in the existing systems.

The weak points of the older methods were:—

(1) A complete break in the life of the child when it entered the school. The occupations which hitherto had taken its attention had all to be abandoned, and without any preparation, or connecting link with the past a new set of employments taken up under somewhat depressing conditions as to discipline and learning.

(2) A waste of effort in trying to build up the powers of the mind without having laid any proper groundwo.k in the way of conceptions and associations derived through sensation. This arises from the neglect to take advantage of the activities and interests of child life and to use these as a basis for the earlier school exercises.

(3) The almost total neglect in the curriculum of observational and construction work, with the consequent narrowing of the pupils mental horizon, through leading him to believe that learning is education, and that scholarship, as gauged by examination standards, forms the test of mental power.

The elements with which it seemed possible to work for the purpose of making good these deficiencies were the restless activity, both physical and mental, of childhood; curiosity and the tendency to imitation that early show themselves; and the desire for achievement in the sense of accomplishing something that will yield a concrete, tangible result.

The applications of these that have been made are to introduce into the school classes some exercises akin to the voluntary employments of childhood and youth, and to turn these to account in the training work of the school, so that by very gradual steps they become a means not only of performing certain operations, but of education and discipline as well.

For the younger children these exercises are designed to avoid the break in the method of life of the child when it enters school, by keeping a connection between home occupations and class exercises; to lead the pupils to feel at home, and thus gain a confidence in themselves for all their exercises, and to stimulate the mental powers and arouse an interest that is carried into the more formal recitations. At the same time these exercises are chosen with a view to their teaching possibilities, especially with regard to development of memory, observation, judgement and concentrated attention. This is the principle of the Kindergarten.

Many good people whose experience with boys and girls comes from limited acquaintance with their neighbors' families during holiday season, bewail the inborn wickedness of the younger members of mankind. Yet the boy who harrys birds' nests, starts dog fights, and becomes a general pest to the neighborhood, may neither be cruel nor a rowdy. At an age when moral sense is as yet immature, there has become dominant for the time an old race proclivity, a tendency to barbarism which has not been bred out of the most civilized of the human species. The school master endeavors to repress this tendency by force and task. To him this phase of youthful character is the distinct manifestation of a presence, that is said to have consorted with the sons of men on other occasions to their detriment. The educator dealing with the same phase does not attempt to repress it but by good guidance to direct into channels where it may discharge itself in useful effort. From this has been evolved that, which for want of a better term has been called Nature Study. It is in no sense a series of lessons in Botany, Geography or anything else formal; but a freedom and an individuality on the part of the pupil in investigatlng in his own way some of the commonly occuring natural objects and phenomena, and in gaining what information he can about them, but with the advice and under the guidance of the teacher. It thus serves somewhat the same purpose as the play element in the Kindergarten; for it connects the school work with ordinary life. It also gives the teacher an opportunity to learn the mental aptitudes and inclinations of the pupils when these happen to lie outside of the ordinary curriculum, while it gives to the scholar an opportunity for the exercise of originality and self-reliance.

There is another line along which recent pedagogical investigation has made it necessary for us to revise our practice and methods. We have to give up the idea that mental power can be effectively gained by training certain alleged faculties of mind and neglecting others. Mind is a unit and is to be treated as such in education. The exercise of memory does not give mathematical power, nor does facility in the use of language indicate any ability for scientific work. One of thc educational possibilities, that has hitherto not been taken advantage of by us, is the inclination to construction work, with concrete materials, that is strongly developed in most boys and girls during their early years; but, like other similiar tendencies, passes away and loses its power if not used. Possibly the notion that such work was entirely mechanical in its nature and did not

offer itself as a convenient medium for mental culture accounts for its being barred from the schools. It is now generally conceded, however, that the child, even in the process of learning to make letters and write simple words, is making intellectual as well as mechanical progress. Physiology proves for us that control of the muscular movements is a function of certain brain centers, and to train these so that the organs guided by them may act in obedience to the will is the psychologic reason for introducting constructive work into the schools. Such exercises begin in the Kindergarten and at later periods include Drawing, Manual Training and Domestic Science. As a general thing these appeal to the interest of the pupils in such a way that they apply themselves to the exercises with an intelligence and alertness that ordinary class work seldom calls out. It seems to me that one of the valuable elements in this kind of school lesson consists in the student's ability to measure and judge his own careless or bad work. Fitche has pointed out that when the results of a course of study are gauged by examination records, there is a considerable danger of the maximum efforts of the students receding to the minimum limit which the examiner will accept. We all know how much pressure it takes on the part of the teacher to prevent this lapse from the best that pupils can do to what they are willing to do. In dealing with physical objects the errors and lapses are measurable by the student himself, and they cannot be made right by rubbing out a symbol on the blackboard and replacing it, nor by interlining a word in a sentence. This induces concentration of attention and intelligent effort; and as the problems become more difficult there is called into play a nicety of manipulation, an originality in contrivance and an ingenuity in the application of means to accomplish the required end, that the ordinary class exercises seldom or never bring out. These are all valuable educational ends, and are just the elements that count in the competitions of after life. So far little has been said about the industrial bearings on the subject under discussion. Partly from my own view that any study must be primarily educative to warrant its being placed on a school curriculun; and partly because the practical application of these exercises to the affairs of life are much more patent to the casual observer than are the educational features.

The older schools, from which we copied our system very largely were an essential part of a social system, designed to nurture class distinctions; consequently the ideals that dominated their aims

and methods were antagonistic to the practical, and there was no development in educational work along lines directly helpful to those engaged in ordinary productive occupations. The industrial revival made it imperative that attention should be given to the needs of the student for whom a liberal education is an impossibility, but for whom the means of earning a respectable livelihood is a necessity. This raises the question at once, What do our schools exist for? I submit that it is the first duty of a system of state administered schools to afford the means to every child in the land to procure that education and training which will enable him to intelligently and efficiently discharge the duties of good citizenship, and good citizenship presupposes a self-supporting, self-respecting citizen at least. Now self-supporting means a relationship with present conditions and the activities that prevail with us. An education whose tendency is to steep men in the records of the past, or in the literature of other lands, so that they may fail to become adapted to their environment requires some modification, such as may be obtained by attention to the group of studies under consideration. These derive their chief industrial value from the attitude of mind they produce toward the productive occupations of the country. Of course manual facility counts for something, but not much. It is the observation of definite concrete materials and the conditions surrounding them, which I may point out is a vastly different thing rrom the observation required in literature and mathematics ; the reasoning from these observations to an accurate conclusion ; and the devising of means to overcome the difficulties of execution that provides the practical in education, and bring school work into close relationship withe that which is beyond the school.

Strangely enough the one phase of the movement which comes most nearly teaching a trade—*Domestic Science*, which professedly is instructing girls in housekeeping operations, is that which has met with most ready support both in the United States and Canada. For my own part I fail to see why schools that recognized as legitmate studies book-keeping and stenography, should not also permit sewing and cooking and mechanical drawing. Surely the contention will not be made that they are not equally educative, and of equally general application.

Recent investigations in the United States, both in the country as a whole and in individual states establish these two conditions, I think, that the wage-earning power of the people is in direct propor-

tion to the average length of school attendance; and that financial prosperity arising from greater wage-earning power leads to better general education, so that any cause which will bring about better results of school work either by prolonging the period of attendance or by increasing the effectiveness of the teaching thereby ultimately will produce greater education and greater material advancement. Then if we can adopt our school work so that it will be effective in giving to the pupils power to think clearly, and to act effectively and while doing this use exercises that appeal to the pupils as interesting and to the people as practical, we will thereby sow seed which in future years following the law of progress, will mature through the university into the best products of scholarship and culture, Kindergarten, Nature Study, Manual Training these appeal to the child as interesting, to the public as practical, and, at the same time furnish to the teachers effective educational instruments.

The significance of these developments of modern school work may be summed up in this way:—

(1) They are the expression of the educational features of the great progressive movement of late years.

(2) They are in accord with the principles of educational progress and the laws of mental growth in that they cause the minds of children to be stored with concepts of things and their associations.

They appeal to the pupil as naturally interesting subjects hence are followed without voluntary effort.

They cause the activities of the child to be turned to useful account rather than to be repressed.

They train centers of motor activity in controlling the hand and eye.

(3) They supplement the common educational curriculum by specially training the powers of observation, and careful judgment, by inducing originality, and accuracy in performance, giving to the student confidence and self reliance in his performances.

(4) They furnish to the pupil a body of knowledge he would not otherwise acquire, they give manual facility of some use in the occupations of after years. They turn the attention of the children toward those ways of making a livelihood which many of them will have to adopt, and keep the school in touch with the occupations as well as the professions of life.

Finally let me repeat a sentence. If these subjects are deemed worthy of a place in schools, and I think they should be there, it

person who remains in the Public School, to say nothing of him who is intending to pass on to the High Schools and Universities. For the latter it is a most serious waste of time. For him our educational system is emphatically an inverted pyramid. The four languages which he needs are the things that are put off till the last, whilst they should come very early. I find it to be a fact that the average person who is prevented from beginning his languages until he is sixteen or thereabouts never makes much of them. Although linguistics and literature are no child's play, it is a fact that a child can make a beginning at them while he is still incapable of several sorts of mental activity. Why then should there be such delay in beginning them as we see in this country?

But there is even worse to be said. Not only are the languages postponed until after the pupil can pass the difficult Entrance Examination, in some cases they are postponed till a still later period. If one looks into the regulations for High Schools he will see that in Forms I and II the languages are optional, i.e., optional in the sense that they may be postponed, not substituted for other things. The old acquaintances, Grammar, Arithmetic, History, Geography, along with Algebra and Geometry, are not optional; they must be taken whether the languages are taken or not. The wasting of time still goes on with the hard problems in Arithmetic and the parsing in Grammar and dry constitutional questions in History, all of which would be easy to do if they came at a later period. But the languages are deferred, the very things which could be most profitably done early in the course, or, if they are taken up, there is but little time for them on account of pressure of other things.

One is tempted to ask himself why is there this inverting of the pyramid? It is, I believe, claimed to be on account of reasons of utility. We hear it said that everyone must first have a sound English education, before he begins to put on such "frills" as Latin, Greek, or the like. I dislike to raise a controversy regarding the comparative utility of school subjects, but I must say that for a sound English education I can't conceive of anything more useful than some or all of the four languages of the High School curriculum. For once that the ordinary man will need to use his Algebra he will need to use his knowledge of Latin a thousand times. And for the professional man the knowledge of the four is indispensable, so also

for the man of science and to a certain extent for the merchant. The Board of Trade of Toronto, for instance, has come to think that French, German, Italian, and Spanish are indispensable to our young men if Canada is to take its proper place in the world of commerce.

There can be no doubt, too, that there is a discipline in the study of language which can hardly be found elsewhere. The foreign languages along with mathematics, have been, and will remain, pre-eminently the schoolman's subjects. The pupil can be brought so squarely face to face with the difficulties, that he can know, and the teacher can know, when he has solved them. The simplicity of the machinery required puts them above the natural sciences, the definiteness of the problems involved puts them above the study of the mother tongue and of history, and their "humanity" puts them above mathematics. Our school course should consequently be constructed to encourage them.

I have said but little of a direct nature regarding the Matriculation Examination to the University. I have come to believe that, although there are many hindrances to learning in the High School and University courses, we have hitherto paid too little attention to those that lie further back in the Public School course. I believe I am doing good service to-day in calling special attention to them. We must get them removed, if we hope to make improvements in the High School and the University.

As regards Entrance to the University, the following should be obligatory: English, Latin, Greek, French, German, Mathematics, with considerably easier questions than are now set, and the following optional: History, Geography, Natural Science. I put the former subjects in the obligatory list because they are all required by a University student, and because if they are not begun before entering they cannot be done so well afterwards. History and Geography and the Natural Sciences should be optional at Matriculation because they can be done much better after entering the University than before.

A word or two of a general character regarding examinations in Ontario and I am done. Our examinations are altogether too pretentious. I have already called attention to the fact that we set fully harder questions in Arithmetic for those who are seeking to enter our High Schools than does the University of Cambridge for those who have entered that University—famous for its Mathematics,

Manual Training,—(for boys)—Bench work in wood, made up of exercises that give accuracy of manipulation and judgement; Lathe-work, Drawing, free hand, geometrical and mechanical. (For Girls) Drawing, color work, sewing, making of garments, cooking of simple dishes, and training in general homekeeping.

ENTRANCE REQUIREMENTS TO HIGH SCHOOLS AND UNIVERSITIES.

By JOHN SQUAIR, B.A., Toronto.

To me the most discouraging thing in connection with education in Canada is that our school machinery has so far produced so little scholarship. If one looks at the persons in Canada who would be considered by the rest of the world as authorities in their respective departments of learning, he finds that their names make a very short list indeed. And another discouraging thing is associated with this, namely, that apparently very few persons are exercised about the matter. Of late there have been a few public utterances which show that some are thinking seriously about this great question, but for the most part our educational reformers are busy about matters which have very little to do with learning.

The causes for this condition of affairs are no doubt various and complex. For instance, we are but a small and new people struggling for a foothold against hostile nature in this great country, and have developed decidedly materialistic characteristics. The minds of most of us are set more on such things as soft beds and full meals more than on that which is idealistic, scientific, or artistic. We have, it is true, spent considerable sums for schools and the like, but always in the hope that we shall get a direct and speedy return of some materialistic kind. Again, the rewards that fall to the scholar are small. No amount of learning in our country can be expected to bring wealth or even fame. Furthermore, no large amount of scholarship is demanded even of him who teaches. What he is supposed to know is pedagogy, *i.e.*, the methods of keeping

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NOTE.—In discussing this subject my remarks will have special reference to conditions in Ontario, since that is the only province with which I am familiar.

wasting his father's money, his teacher's strength, and his own time. He ought to be made to realize by the wisest means that can be devised for him that he owes duties to society at large, and that only he has a right to live and enjoy life, who, in some useful way, is contributing to the good and the happiness of others.

The pupil, on the other hand, who has even moderate ambitions and, possibly, only indifferent mental endowments may, with honest endeavour, attain, under the guidance of a conscientious, high-minded, well-instructed teacher, to a good degree of proficiency in reading, writing, and, perhaps, speaking French and German, notwithstanding the limitations already referred to. Further than this he can scarcely hope to go under existing conditions, hence these limitations and the teacher's ideals would appear to be the main subjects for consideration at the present time.

I.—Time-Tables.

Three classes of limitations have been already mentioned,—time-tables, examinations, and the length and character of the High School course. To dwell long upon the construction of time-tables, and, in particular, to inveigh against headmasters, as is almost invariably done by most of those who deal with this subject, is unprofitable. The difficulties of the problem increase with multiplication of options and diminution in the size of the staff.

In spite of the wide range of options allowed ten years ago in the senior forms of the secondary schools in Ontario, it was still possible at a large school like Upper Canada College to divide the working week into thirds of ten periods each, devoted respectively, at the rate of two periods a day, to Mathematics, Classics (with Ancient History), and Modern Languages (including English and English History). The proportion observed between French and German, on the one hand, and English and History, on the other, was as six to four, while science was adequately provided for by allowing boys wishing to take the subject to spend in the laboratory their spare hours from Trigonometry, Greek, French, or German, as the case might be.

It is not impossible that such a division of the day and week might work out well in a school with so few as three, or even two masters, in which, happily, the attempt is not made to teach every pupil in every period. Whether the attempt so to do is ever desirable may well be questioned. We are greatly in danger of teaching

(1) Special High Schools might be established for the study of the languages, to which pupils might be admitted at an early age without examination.

(2) The study of the languages might be begun in the third or fourth forms of Public Schools.

(3) Preparatory forms might be instituted in High Schools, to which young pupils might be admitted.

(4) The entrance examination to High Schools might be made easier.

The first of these plans presents more serious difficulties than the others, and so, for the present, we may pass it by without discussion. The other three are more clearly within the limits of the practicable, and all might be introduced simultaneously, for they would not be mutually inconsistent.

The second plan, that of beginning the languages in the third and fourth forms of the Public Schools, would confer a great boon on villages and small towns where there are no High Schools. Within the last year or two several parents residing in small villages have complained to me of the difficulties they experience in getting such education as they desire for their children. They cannot get Latin and French in the Public School at home, and the High School in a neighbouring town is too distant for their children to attend without leaving the parental roof. So, precious time is lost waiting till the boy or girl is old enough to go away from home. The difficulties in the way are that the schools would be a little more expensive, and that we have not a body of Public School teachers competent to do the work. The first of these difficulties is not a serious one, and the second would be removed in a few years' time. Our High Schools would soon provide a class of teachers able to discharge such duties as would be demanded of them in this respect.

Regarding the third plan, namely, that of providing preparatory classes in High Schools for such as desire to begin their languages early, I can see no objection to it except that it might cost a little, but I cannot think of any harm being done by allowing School Boards in towns and cities to have the power to organize such classes for those who are willing to pay for them.

The fourth plan should be one of the widest application and if carried far enough perhaps the most effective in giving relief. If I were asked to fix the subjects for a High School Entrance Examination I should consider the following subjects only as necessary:

The same kind of mistake was found also, and more frequently, in the answers to the German paper. But here the additional vice manifested itself, I should say in fully twenty-five per cent. of the papers, of writing *haben gesetzt* for *gesetzt haben*, while I became quite accustomed to the monstrosity *haben gewesen.*

It is not my intention to raise any discussion concerning the merits of the natural, as opposed to the grammatical method, or the reverse. To him who can use it, either of them is good, and every teacher must, after all, evolve his own method. But I do think that accuracy is a thing which we have a right to expect from our pupils, and which they in turn have a right to expect from us.

Whatever method of teaching may be adopted, the verbs in the texts read, and in the grammar, ought to be thoroughly drilled into the pupils, for it is wonderful what an extensive vocabulary anyone will have who has once mastered his verbs in either French or German. If the admirable hints for drill in the verbs which are thrown out in the new authorized grammars are utilized, this drill will not be irksome to either teacher or pupil, but, by means of the sentences used, it can be made to subserve admirably the purposes of conversation, as well as those of training both ear and tongue, all of which are to be desired.

Another sort of inaccuracy which has tried my patience recently is that arising out of imperfect assimilation of the vocabulary contained in the texts prescribed for examination. With wearisome iteration I heard, when I was discussing my papers with the associate examiners, the phrase, "But the candidate has the idea," even though he had, in my opinion, exhausted most, if not all, of the marks by mistakes due to crass ignorance and culpable approximation. This was in connection, it must be remembered, with passages that were to be prepared no less than those which were to be taken at sight. I may be wrong, but it does seem to me that no one, to use the phrase again, "has the idea," in the true meaning of the words, unless he can reproduce it in good, idiomatic English, with proper regard for literalness of translation. When next I examine for the Department I hope that it will not be necessary for me to argue this point again. I cannot but think the phrase an attempt to apologize for inaccuracy, which is, after all, carelessness and laziness. Both of these we, as teachers, ought to correct in our pupils, wherever we see them, for where they are there can be at best only absence of character.

III.—Examination Success.

Character and love of knowledge we cannot expect to see growing up in our pupils if we teach for examinations alone, and if, in so doing, we lead them to believe that success (save the mark !) is the only thing worth having, no matter how it is attained. Love of the subject and a thorough determination to pursue it patiently, and in accordance with its own laws, after he leaves school, are far better worth striving to inspire in a pupil than a low desire for any amount of mere examination success. I have a theory, which I am glad to say others besides myself have often worked out in practice, that anyone who is filled with a love of French and German, and who is constantly increasing his own acquaintance with them will be rewarded by seeing this love and determination I have spoken of growing up in his pupils if he teaches the subjects without reference to examinations at all; and he will not have to fear the day of publication of results either.

IV.—Length of the High School Course.

Whether it is customary now, as it used to be, for pupils to come without any previous knowledge of the subjects and request to be prepared for the Junior or the Senior Leaving Examination in French aud German in periods ranging from three to ten months, I cannot say. I sincerely hope it is not. There should be only one answer for such a pupil, and that is, it is impossible, unless you are a linguistic genius. None but a genius could in one school year (much less in a shorter time) begin to have any conception of what is meant by language study and by the laws of a language, to which he must conform who wishes to really learn anything of it.

If, instead of two Leaving Examinations, there were only one, which should be such in reality, and not in name merely, for the vast majority of our High School pupils, we should be the better able to work out our ideals without distraction. The majority of the pupils, it cannot be too often said, are neither prospective teachers nor prospective university students.

Again, if none but those who had taken the whole High School course were permitted to present themselves for this simplified Leaving Examination, the position of affairs would be further improved. This would be the case especially if the Entrance Examination were abolished and those who might wish to study the languages were thus placed in a position that would enable them to begin them early

without any fear of spending at least four, if not six, years or more upon them.

After a somewhat long experience, four years seem to me the fewest possible in which to do for a pupil leaving school for good that which will enable him to go on by himself with the study of modern languages, or indeed, with any of the other subjects of study. Once more let it be said, that ought to be the objective of our High School course ; and it can hardly be maintained with due regard to truth-telling, that it is so to-day.

V.—Character of the Course.

In Germany it is found possible to give the pupils of the *Real-Schulen*, in which modern languages (French and German), are compulsory, in the *Gymnasien*, in which they are optional, and in the *Toechter-Schulen*, a good grammatical training, a considerable amount of practice in conversation, the usual exercises in translating into and out of the vernacular, together with two things which we do not attempt at all, some general ideas concerning the history of literature and information about the history, institutions, social customs, legends, etc., of the nations speaking the languages in question. Professor Storm, who, though a Dane, holds the German views of language study, makes, in his great work on English Phonetics, a characteristic remark, in a foot-note which his German translator faithfully reproduces. Criticizing a certain work on the same subject, he writes somewhat as follows : "It is a pity the author has not traced the evolution of the English dinner-hour. In Queen Elizabeth's time we know that it was noon ; in the earlier part of the 19th century we know, from Dickens, that it was as late as five o'clock, while now it is seven, half-past seven, eight, or later. Tracing the causes of these changes would have been a valuable contribution to the science of Phonetics." What the connection between the two may be, specialists in Phonetics must be left to determine ; my concern is with the fact that nothing is too trivial to be deemed of some importance in the study of languages. Does not this study thus understood become an intensely interesting thing, an intensely human thing, and an infinitely more useful means of culture, in the true sense of that much abused word, than it is when it is made a mere cram for an examination, with the scantest possible attention to the right use of those two indispensable tools, the grammar and the dictionary?

As we should hardly be willing to be called poorer or less clever than the Germans, the course which we ought to aim at introducing, by degrees, into our High Schools would take account of grammar, conversation, translation from and into English, broad outlines of French and German, and studies in *Landeskunde*, as the Germans call it. The last-mentioned could be taught from the teacher's own experience, or from his reading, as I heard being done in a course on English, Colonial, and American Universities delivered in English by a distinguished graduate of Glasgow University, who is Lector in English at the University of Stassburg. Or the teaching could be based upon text-books (for one would not be sufficient) as is often done in Germany.

The only attempt at such a book on this side of the Atlantic, so far as I know, is Herr Stern's *Geschichten vom Rhein*, published by the American Book Company, of New York. It is doubtless known to many of you through the courtesy of the publishers; and you will probably agree with me that it would be hard to devise anything more interesting as a first reader in German. The whole Rhine is traversed from Switzerland to Holland, and very many of the most interesting legends are narrated. The pleasures of memory, and, possibly, of travel in days to come, would be increased tenfold for pupils using such books, while now, as we know only too well, the tendency, in too many cases is to hasten straightway to forget what was learned at school as having no connection with life in general. Too frequently the thirst for knowledge is quenched forever, instead of being deepened and increased.

So far as translation is concerned, it seems to me that, for the sake of securing the accuracy I have already insisted upon as a desideratum, one, but not more than one, text ought to be prescribed in any one year of the course. From personal experience and from observation, I should say that it is impossible for the average pupil to assimilate more than one book, and, at the same time, to pay proper attention to oral exercises and grammatical drill.

So long as we have the present unsatisfactory arrangement of the Leaving Examinations, which I look upon as only temporary and as preparatory to something better, it cannot do much harm to have two books for the Senior Leaving Examination, for it is supposed to represent at least two years of work. When the better day dawns, not only the course, but the character of the examinations will have

to be changed, in order to take account, as opportunity offers, of such things as I have here set down as desirable.

VII.—Modern Languages and Business.

My subject confines me to High Schools and the average pupil in them—the chief care, and yet, in a manner, the curse of our whole educational system in Ontario. We are trying, as it were, with one and the same set of machinery, to manufacture articles intended for uses as far apart from one another as kitchen crockery is from webs of finest silk. If I were speaking of commercial courses and Business Colleges, to which the former ought to be transferred, I should speak of commercial and journalistic French and German. With increasing interprovincial and international trade, there can be little doubt that an ever-increasing demand will be made for clerks with a thorough knowledge of these languages, and perhaps of Spanish and Italian also.

If we had anything corresponding to the *Real-Schulen* of Germany, or even a respectable number of technical schools, I might speak of the relation of modern languages to manufactures. We have only the High Schools (and Collegiate Institutes), and they are for culture purposes alone—a fact which should never be lost sight of. We must stand firm upon the ground that the educational system is not intended to prepare boys and girls to earn a living, but through their studies and their intercourse with men and women of character and education, in the fullest sense of the term, to train their intelligence and develop their character to such an extent as shall enable them to profit speedily by the further processes of training that are to fit them for earning a livelihood, and shall enable them likewise to adapt themselves readily to the ever-changing conditions of life in such a way as to perform honestly and honourably the various duties devolving upon them.

VII.—Character.

What the old Bishop was as a man, Jean Valjean was inspired to become by his brief contact with him. The story of his "becoming" is, I suppose, Victor Hugo's main theme in "Les Misérables," while in "Quatre-Vingt-Treize" he makes special application of this idea of spiritual fatherhood to the relation of master and pupil in the characters of Gauvain and Cimourdain. If there is any truth in this

person who remains in the Public School, to say nothing of him who is intending to pass on to the High Schools and Universities. For the latter it is a most serious waste of time. For him our educational system is emphatically an inverted pyramid. The four languages which he needs are the things that are put off till the last, whilst they should come very early. I find it to be a fact that the average person who is prevented from beginning his languages until he is sixteen or thereabouts never makes much of them. Although linguistics and literature are no child's play, it is a fact that a child can make a beginning at them while he is still incapable of several sorts of mental activity. Why then should there be such delay in beginning them as we see in this country ?

But there is even worse to be said. Not only are the languages postponed until after the pupil can pass the difficult Entrance Examination, in some cases they are postponed till a still later period. If one looks into the regulations for High Schools he will see that in Forms I and II the languages are optional, i.e., optional in the sense that they may be postponed, not substituted for other things. The old acquaintances, Grammar, Arithmetic, History, Geography, along with Algebra and Geometry, are not optional ; they must be taken whether the languages are taken or not. The wasting of time still goes on with the hard problems in Arithmetic and the parsing in Grammar and dry constitutional questions in History, all of which would be easy to do if they came at a later period. But the languages are deferred, the very things which could be most profitably done early in the course, or, if they are taken up, there is but little time for them on account of pressure of other things.

One is tempted to ask himself why is there this inverting of the pyramid? It is, I believe, claimed to be on account of reasons of utility. We hear it said that everyone must first have a sound English education, before he begins to put on such "frills" as Latin, Greek, or the like. I dislike to raise a controversy regarding the comparative utility of school subjects, but I must say that for a sound English education I can't conceive of anything more useful than some or all of the four languages of the High School curriculum. For once that the ordinary man will need to use his Algebra he will need to use his knowledge of Latin a thousand times. And for the professional man the knowledge of the four is indispensable, so also

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I have said but little of a direct nature regarding the Matriculation Examination to the University. I have come to believe that, although there are many hindrances to learning in the High School and University courses, we have hitherto paid too little attention to those that lie further back in the Public School course. I believe I am doing good service to-day in calling special attention to them. We must get them removed, if we hope to make improvements in the High School and the University.

As regards Entrance to the University, the following should be obligatory: English, Latin, Greek, French, German, Mathematics, with considerably easier questions than are now set, and the following optional: History, Geography, Natural Science. I put the former subjects in the obligatory list because they are all required by a University student, and because if they are not begun before entering they cannot be done so well afterwards. History and Geography and the Natural Sciences should be optional at Matriculation because they can be done much better after entering the University than before.

A word or two of a general character regarding examinations in Ontario and I am done. Our examinations are altogether too pretentious. I have already called attention to the fact that we set fully harder questions in Arithmetic for those who are seeking to enter our High Schools than does the University of Cambridge for those who have entered that University—famous for its Mathematics,

And extreme difficulty is a fault not confined to Arithmetical questions. It is quite common in other subjects, and there could not be a worse fault. We should make an improvement if we lessened the difficulty of our questions and increased the minimum necessary for passing. Another thing is, that Examinations should not be used so much as a means of controlling the schools which prepare candidates for the examinations. The proper function of an examination is to discover who is worthy to pass on and up, but not to be a whip over the heads of those below. One of the commonest arguments regarding those subjects which should form part of an examination is that such and such subjects must be examined on or they will not be studied. This is a dangerous perversion of the purpose of examinations, and is the cause of not a little of the confusion prevailing in education at present. We should examine for the sake of the institutions for which the examinations is the entrance, and not for those for which the examination is the exit.

WHAT A PUPIL HAS A RIGHT TO EXPECT AS A RESULT OF HIS HIGH SCHOOL TRAINING IN FRENCH OR GERMAN.

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The right of a pupil to have any expectations in this matter depends upon his own aims, ability, and application, his teacher's ideals, training, and sense of duty, and the limitations imposed upon both of them by time-tables, the length and character of the High School course, and the wearisome round of the ever-recurring examinations. Concerning the pupil who lacks ambition and linguistic capacity, and who is, moreover, incorrigibly idle, I have nothing to say, except that it is little short of a crime to keep him at school,

wasting his father's money, his teacher's strength, and his own time. He ought to be made to realize by the wisest means that can be devised for him that he owes duties to society at large, and that only he has a right to live and enjoy life, who, in some useful way, is contributing to the good and the happiness of others.

The pupil, on the other hand, who has even moderate ambitions and, possibly, only indifferent mental endowments may, with honest endeavour, attain, under the guidance of a conscientious, high-minded, well-instructed teacher, to a good degree of proficiency in reading, writing, and, perhaps, speaking French and German, notwithstanding the limitations already referred to. Further than this he can scarcely hope to go under existing conditions, hence these limitations and the teacher's ideals would appear to be the main subjects for consideration at the present time.

I.—Time-Tables.

Three classes of limitations have been already mentioned,—time-tables, examinations, and the length and character of the High School course. To dwell long upon the construction of time-tables, and, in particular, to inveigh against headmasters, as is almost invariably done by most of those who deal with this subject, is unprofitable. The difficulties of the problem increase with multiplication of options and diminution in the size of the staff.

In spite of the wide range of options allowed ten years ago in the senior forms of the secondary schools in Ontario, it was still possible at a large school like Upper Canada College to divide the working week into thirds of ten periods each, devoted respectively, at the rate of two periods a day, to Mathematics, Classics (with Ancient History), and Modern Languages (including English and English History). The proportion observed between French and German, on the one hand, and English and History, on the other, was as six to four, while science was adequately provided for by allowing boys wishing to take the subject to spend in the laboratory their spare hours from Trigonometry, Greek, French, or German, as the case might be.

It is not impossible that such a division of the day and week might work out well in a school with so few as three, or even two masters, in which, happily, the attempt is not made to teach every pupil in every period. Whether the attempt so to do is ever desirable may well be questioned. We are greatly in danger of teaching

too much and of leaving the pupil, to his own hurt, to depend too little upon himself. This evil of over-teaching is undoubtedly due in no small measure to the second of the limitations to be considered—examinations.

II.—EXAMINATIONS.

"Pupils must be passed," so I am assured by those who are most affected by the evil, or the teacher "loses his place," as the phrase goes. As odious a phrase it is as those others which are seen in the papers every day during the summer vacation:—"State salary expected"; "Wanted, a Male Teacher"; "Wanted, a Female Teacher." The last two savour somewhat of the old slave days, which are supposed to be gone for ever. But with schoolmasters and schoolmistresses of to-day it is, I fear, a supposition and nothing more. And they themselves have to bear at least part of the blame for the existing state of affairs.

Not only is the aim of the teacher lowered, perhaps insensibly, and independence stifled in the pupil, but a great deal of hasty (therefore bad) teaching and inaccuracy is the result. On the latter point I feel strongly, for I have just finished reading three sets of scholarship papers for the Universities of Ontario, the examination being conducted by the Education Department. Hardly one of the candidates (about 120 in number) was able to give correctly common forms of verbs in general use occurring in the prescribed texts.

The imperative of the verb *s'asseoir*, conjugated either affirmatively or negatively, ought surely to be familiar to honour candidates for University scholarships, yet scarcely ten per cent. of them gave the verbal forms correctly. A larger percentage understood in a vague fashion that the order of the pronouns changed when the negative appeared, but they did not always manage to give their proper forms.

The nomenclature of the tenses is something apparently not taught in the majority of schools; and, I fear, the same must be said of the functions of the tenses also. In vain have I asked in years gone by for the perfect or the past indefinite of the indicative, giving the two names together. Candidate after candidate has thought the past definite was meant, while some have written the imperfect. This year I sought to avoid the difficulty of nomenclature by asking for the perfect of the infinitive, and in many cases the answers contained the past participle alone, while a few candidates gave forms such as *ayant tenu*.

The same kind of mistake was found also, and more frequently, in the answers to the German paper. But here the additional vice manifested itself, I should say in fully twenty-five per cent. of the papers, of writing *haben gesetzt* for *gesetzt haben*, while I became quite accustomed to the monstrosity *haben gewesen.*

It is not my intention to raise any discussion concerning the merits of the natural, as opposed to the grammatical method, or the reverse. To him who can use it, either of them is good, and every teacher must, after all, evolve his own method. But I do think that accuracy is a thing which we have a right to expect from our pupils, and which they in turn have a right to expect from us.

Whatever method of teaching may be adopted, the verbs in the texts read, and in the grammar, ought to be thoroughly drilled into the pupils, for it is wonderful what an extensive vocabulary anyone will have who has once mastered his verbs in either French or German. If the admirable hints for drill in the verbs which are thrown out in the new authorized grammars are utilized, this drill will not be irksome to either teacher or pupil, but, by means of the sentences used, it can be made to subserve admirably the purposes of conversation, as well as those of training both ear and tongue, all of which are to be desired.

Another sort of inaccuracy which has tried my patience recently is that arising out of imperfect assimilation of the vocabulary contained in the texts prescribed for examination. With wearisome iteration I heard, when I was discussing my papers with the associate examiners, the phrase, "But the candidate has the idea," even though he had, in my opinion, exhausted most, if not all, of the marks by mistakes due to crass ignorance and culpable approximation. This was in connection, it must be remembered, with passages that were to be prepared no less than those which were to be taken at sight. I may be wrong, but it does seem to me that no one, to use the phrase again, "has the idea," in the true meaning of the words, unless he can reproduce it in good, idiomatic English, with proper regard for literalness of translation. When next I examine for the Department I hope that it will not be necessary for me to argue this point again. I cannot but think the phrase an attempt to apologize for inaccuracy, which is, after all, carelessness and laziness. Both of these we, as teachers, ought to correct in our pupils, wherever we see them, for where they are there can be at best only absence of character.

III.—Examination Success.

Character and love of knowledge we cannot expect to see growing up in our pupils if we teach for examinations alone, and if, in so doing, we lead them to believe that success (save the mark !) is the only thing worth having, no matter how it is attained. Love of the subject and a thorough determination to pursue it patiently, and in accordance with its own laws, after he leaves school, are far better worth striving to inspire in a pupil than a low desire for any amount of mere examination success. I have a theory, which I am glad to say others besides myself have often worked out in practice, that anyone who is filled with a love of French and German, and who is constantly increasing his own acquaintance with them will be rewarded by seeing this love and determination I have spoken of growing up in his pupils if he teaches the subjects without reference to examinations at all ; and he will not have to fear the day of publication of results either.

IV.—Length of the High School Course.

Whether it is customary now, as it used to be, for pupils to come without any previous knowledge of the subjects and request to be prepared for the Junior or the Senior Leaving Examination in French aud German in periods ranging from three to ten months, I cannot say. I sincerely hope it is not. There should be only one answer for such a pupil, and that is, it is impossible, unless you are a linguistic genius. None but a genius could in one school year (much less in a shorter time) begin to have any conception of what is meant by language study and by the laws of a language, to which he must conform who wishes to really learn anything of it.

If, instead of two Leaving Examinations, there were only one, which should be such in reality, and not in name merely, for the vast majority of our High School pupils, we should be the better able to work out our ideals without distraction. The majority of the pupils, it cannot be too often said, are neither prospective teachers nor prospective university students.

Again, if none but those who had taken the whole High School course were permitted to present themselves for this simplified Leaving Examination, the position of affairs would be further improved. This would be the case especially if the Entrance Examination were abolished and those who might wish to study the languages were thus placed in a position that would enable them to begin them early

without any fear of spending at least four, if not six, years or more upon them.

After a somewhat long experience, four years seem to me the fewest possible in which to do for a pupil leaving school for good that which will enable him to go on by himself with the study of modern languages, or indeed, with any of the other subjects of study. Once more let it be said, that ought to be the objective of our High School course ; and it can hardly be maintained with due regard to truth-telling, that it is so to-day.

V.—Character of the Course.

In Germany it is found possible to give the pupils of the *Real-Schulen*, in which modern languages (French and German), are compulsory, in the *Gymnasien*, in which they are optional, and in the *Toechter-Schulen*, a good grammatical training, a considerable amount of practice in conversation, the usual exercises in translating into and out of the vernacular, together with two things which we do not attempt at all, some general ideas concerning the history of literature and information about the history, institutions, social customs, legends, etc., of the nations speaking the languages in question. Professor Storm, who, though a Dane, holds the German views of language study, makes, in his great work on English Phonetics, a characteristic remark, in a foot-note which his German translator faithfully reproduces. Criticizing a certain work on the same subject, he writes somewhat as follows : "It is a pity the author has not traced the evolution of the English dinner-hour. In Queen Elizabeth's time we know that it was noon ; in the earlier part of the 19th century we know, from Dickens, that it was as late as five o'clock, while now it is seven, half-past seven, eight, or later. Tracing the causes of these changes would have been a valuable contribution to the science of Phonetics." What the connection between the two may be, specialists in Phonetics must be left to determine ; my concern is with the fact that nothing is too trivial to be deemed of some importance in the study of languages. Does not this study thus understood become an intensely interesting thing, an intensely human thing, and an infinitely more useful means of culture, in the true sense of that much abused word, than it is when it is made a mere cram for an examination, with the scantest possible attention to the right use of those two indispensable tools, the grammar and the dictionary ?

As we should hardly be willing to be called poorer or less clever than the Germans, the course which we ought to aim at introducing, by degrees, into our High Schools would take account of grammar, conversation, translation from and into English, broad outlines of French and German, and studies in *Landeskunde*, as the Germans call it. The last-mentioned could be taught from the teacher's own experience, or from his reading, as I heard being done in a course on English, Colonial, and American Universities delivered in English by a distinguished graduate of Glasgow University, who is Lector in English at the University of Stassburg. Or the teaching could be based upon text-books (for one would not be sufficient) as is often done in Germany.

The only attempt at such a book on this side of the Atlantic, so far as I know, is Herr Stern's *Geschichten vom Rhein*, published by the American Book Company, of New York. It is doubtless known to many of you through the courtesy of the publishers; and you will probably agree with me that it would be hard to devise anything more interesting as a first reader in German. The whole Rhine is traversed from Switzerland to Holland, and very many of the most interesting legends are narrated. The pleasures of memory, and, possibly, of travel in days to come, would be increased tenfold for pupils using such books, while now, as we know only too well, the tendency, in too many cases is to hasten straightway to forget what was learned at school as having no connection with life in general. Too frequently the thirst for knowledge is quenched forever, instead of being deepened and increased.

So far as translation is concerned, it seems to me that, for the sake of securing the accuracy I have already insisted upon as a desideratum, one, but not more than one, text ought to be prescribed in any one year of the course. From personal experience and from observation, I should say that it is impossible for the average pupil to assimilate more than one book, and, at the same time, to pay proper attention to oral exercises and grammatical drill.

So long as we have the present unsatisfactory arrangement of the Leaving Examinations, which I look upon as only temporary and as preparatory to something better, it cannot do much harm to have two books for the Senior Leaving Examination, for it is supposed to represent at least two years of work. When the better day dawns, not only the course, but the character of the examinations will have

to be changed, in order to take account, as opportunity offers, of such things as I have here set down as desirable.

VII.—Modern Languages and Business.

My subject confines me to High Schools and the average pupil in them—the chief care, and yet, in a manner, the curse of our whole educational system in Ontario. We are trying, as it were, with one and the same set of machinery, to manufacture articles intended for uses as far apart from one another as kitchen crockery is from webs of finest silk. If I were speaking of commercial courses and Business Colleges, to which the former ought to be transferred, I should speak of commercial and journalistic French and German. With increasing interprovincial and international trade, there can be little doubt that an ever-increasing demand will be made for clerks with a thorough knowledge of these languages, and perhaps of Spanish and Italian also.

If we had anything corresponding to the *Real-Schulen* of Germany, or even a respectable number of technical schools, I might speak of the relation of modern languages to manufactures. We have only the High Schools (and Collegiate Institutes), and they are for culture purposes alone—a fact which should never be lost sight of. We must stand firm upon the ground that the educational system is not intended to prepare boys and girls to earn a living, but through their studies and their intercourse with men and women of character and education, in the fullest sense of the term, to train their intelligence and develop their character to such an extent as shall enable them to profit speedily by the further processes of training that are to fit them for earning a livelihood, and shall enable them likewise to adapt themselves readily to the ever-changing conditions of life in such a way as to perform honestly and honourably the various duties devolving upon them.

VII.—Character.

What the old Bishop was as a man, Jean Valjean was inspired to become by his brief contact with him. The story of his "becoming" is, I suppose, Victor Hugo's main theme in "Les Misérables," while in "Quatre-Vingt-Treize" he makes special application of this idea of spiritual fatherhood to the relation of master and pupil in the characters of Gauvain and Cimourdain. If there is any truth in this

idea, and few will deny the fact, it behooves us teachers to know well what manner of men we are and ought to be.

VIII.—Interrelation of Knowledge.

Teachers of modern languages, perhaps more than any other men and women, except the teachers of History, ought to have a sense of the interrelation of the various branches of knowledge.

The classical man may, and sometimes does, look down upon the modern languages as not being worthy of his pursuit. In that he makes a great mistake, for no man can be counted a thorough classical scholar nowadays, if he does not know something at first hand of French and German criticism and archæological research, while his so-called philology, as still treated in some universities, is wofully incomplete without a study of the variations from the old Latin forms presented in the successive stages of the Romance languages. Yet the classical man who lacks a knowledge of modern languages is no worse than the teacher or student of modern languages who thinks that the *Strassburg Oaths* are the real beginning of the life of the world. Without Latin at least, Romance philology is ridiculous, and much of French literature (to speak of no other) difficult, if not impossible, to appreciate.

Classicist and Modern have fought in Ontario in the days gone by, and I am not sure that the fight is over yet. Instead of so doing, they ought to have been working together as those whose cause is one for the advancement of the interests of education generally, and they ought to have been learning from each other methods of instruction in their favourite subjects of study.

History and philosophy touch all departments of human knowledge at so many points that, without them, study of the literature and language of any nation, ancient or modern, has next to no meaning. Without Kant, where were Schiller? And without Comte, where were Taine and many another writer of France in the last century? To the philosophers and historians, then, we are under obligation, which, happily, we can in some sort repay, for no philosopher now can do his work without German, and in my opinion, without French also. To him who would study the history of Canada, French is absolutely necessary, while the body of historical literature in this country would be much less than it is, were it not for the work that has been done in the province of Quebec.

The great mathematicians and the great men of science in France and Germany, together with their great inventors, have made it impossible, as we all know, for students, manufacturers, and business men to disregard their work. Once again, we students and teachers of modern languages have a part to play in this co-operative work of education and of facilitating the increase of the sum of human knowledge. In return we gain from the men of science and the mathematicians the benefits of their method. Moreover, if we will but let them have their full influence, we may have the benefit of learning from our study of the best French writers, from Pascal onward, the merits of clear expression, due, on the one hand, to clear, logical thinking, and, on the other, to the fact that the language itself was fashioned by the thinkers to make their thoughts clear to the ordinary man.

Having regard, then, to the mutual relations of such importance which exist between modern languages and other departments of study, we ought to set our faces resolutely against everything that looks like undue depreciation of any given subject of study, whether it is the broad, abstract question that is being discussed, or simply one of time-table, or the course a pupil is to take. In regard to the last-mentioned, I am afraid that predilections of principals or masters often have more to do with the decision than the pupil's own tastes and aptitudes.

IX.—International Considerations.

Bearing in mind that, generally speaking, we are, to a certain extent, the interpreters of the thoughts and ideals of nation to nation, we ought to remember in times of quiet as well as of crisis, that other nations besides the British have their appointed work to do, that our ways are not their ways, and that ours are not of necessity better than theirs. To cultivate respect for individuals while we hold views different from theirs, is counted a praiseworthy thing. Why the same rule should not apply to nations, I fail to see. Moreover, there are many things we might well learn from France and Germany, to mention only everyday things, such as respect, courtesy, thrift, and finding happiness in simple pleasures. This mental attitude, then, is another of those things which I hold that the pupil has a right to expect from his High School course in French and German.

X.—National Concerns.

Following out this same train of thought, and applying it nearer home, let me say that, in building up our Canadian nation, we who teach French have an important part to play. I shall not say German this time, for the same considerations do not apply to it with the same force as to French.

In the main we have in the nation the two constituent parts, French and Anglo-Saxon (or Anglo-Celtic, as some say) descended, to a certain extent, from a common stock, whether we go back to the Northland from which both sprang, or only to the eleventh century, when the one which now calls itself in its pride the dominant race was then the vanquished. It took three hundred years to weld the English and the Normans into one nation. Shall we grumble when we have done so much in a hundred and fifty ?

We who are of Scotch or Irish extraction have no right to countenance in any way either aggressive talk or aggressive action when the rights of the French Canadians, guaranteed to them by solemn pledges, are attacked. We should remember how the respective Acts of Union are viewed, even at this late date, in Edinburgh and Dublin. As our kinsfolk in the old homeland have set themselves by intellect and valour to make the term " dominant partner " a misnomer, and have largely succeeded, as witness Mr. Balfour and Lord Rosebery, together with Lords Wolseley and Roberts, let us on this side of the Atlantic not grudge to our French fellow subjects, especially of Quebec, all the honours they have won at home or abroad, thus bringing fresh glory to the Canadian name.

For the sake of the Canada that is to be, let us work on side by side, with the strictest regard for old promises and present rights, striving to outdo each other only in that which is for the country's good. If we go down before the others, it will be only because we shall deserve to do so, disagreeable though the thought may be.

Because of the great influence which teachers generally may have in promoting peace and goodwill I have ventured to speak of these matters here. Because of the Language question involved, I go further, for that is the sphere of the modern language teacher particularly.

XI.—Bi-Lingual Communities.

In mixed communities, such as Ottawa, Montreal, and Quebec, how much it would conduce to a kindly feeling if the population

were even approximately bi-lingual, as is the case in Western and Northern Switzerland and in South-Western Germany ! Following the example of the Englishman, our people usually speak one language only, a custom which is not to be commended. If we do not choose to change the custom, let us also follow his worthy example in the matter of the Welsh and Gaelic languages ; and, in view of its projected revival in the schools of Ireland, let us not make over much of the recent refusal to allow Erse to be spoken in the House of Commons at Westminster.

XII.—Practical Teaching.

In communities where the two nationalities meet they cannot be expected to commingle at once any more than do the Ottawa and the St. Lawrence at their confluence, fitting emblems of the two. But in such communities the teaching of French should be made as practical as possible, while, considering that education ought always to bear some relation to the needs of the nation, that language should be taught more and more throughout the whole country.

Here would come in also the utiliity of my plea for *Landeskunde* which would supply what is sometimes lacking in the teaching of history. It has, unfortunately, become too much a question of constitutions and legislative enactments. To obtain the requisite knowledge, teachers would have to go to the Province of Quebec, unless some wretched text-book were devised, from which may we be delivered !

During these sojourns in Quebec teachers would learn more of the spoken language. Why the Education Department does not require residence in French and German settlements, I fail to see. If visits to Europe were possible, so much the better. They being impracticable in many cases, it would be well to require of specialists such an addition to their academic training as that just mentioned. The average of good French in the Province of Quebec, and of good German, say, in the county of Waterloo, is, upon the whole, as high as the average of good English, I take it, in this or any other English-speaking province. However, if it were not what it is, anyone who had been well trained in the languages might go with impunity to either of the districts mentioned, for he would know how to choose the good and leave the bad.

With teachers properly trained (as numbers of them already are), filled also with enthusiasm for their subject and their work, informed

by a proper conception of what the study of a language means, and animated by a desire to be useful, in the highest and best of ways, to their country, there would be practically no limitation, except his own immaturity and will-power, to the expectations which a pupil might fairly hope to have realized during his course of study in the French and German of the High Schools, given, of course, the removal of the drawbacks now offered by the three sets of limitations herein considered. And, in the best, the only right sense of the word, he would be a cultured man, for he would have learned not only to love and to continue his studies after leaving school, but, through them, he would have learned how to discharge his duties to himself, to society, and to his country.

SHOULD GREEK AND LATIN BE RETAINED AS SUBJECTS IN OUR SECONDARY SCHOOLS?

By JOHN HENDERSON, M.A.

There are some questions that constantly return. They resemble some of the comets that visit our system. At first they seem small and insignificant, but increase in interest, afterwards pass away and for a time are unheard of and perhaps forgotten altogether, only to appear again. Or, to change the simile, these questions are like

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Subjects for Matriculation in Toronto University :

1880 ; Latin, Greek, Mathematics, English (with History) and Moderns (optional).

1885 ; Latin, Greek (or French and German) English (with History) Mathematics, Science (optional).

1890 ; Latin, English (with History), Mathematics with the following options (a) Greek, (b) French and German, (c) French and Science, (d) German and Science.

1895 ; Latin, English (with History), Mathematics, one modern language with options (a) Greek, (b) the other modern language and Science.

1900; Latin, English with History, Mathematics with any two of the following options (a) Greek, (b) French, (c) German or (d) Science.

some of the rivers of Greece that flow along their channel for a distance, then suddenly disappear in the ground and again rise to the surface in another part of the country. The question of the position of Greek and Latin in our schools has been discussed over and over again, and when it comes up, the same arguments will be advanced, the same facts will be stated, and the same fallacies refuted. I have, therefore, to say in the beginning that, no doubt, many of you will find in this paper today arguments and replies with which you are quite familiar.

In Ontario, the study of Latin, and especially of Greek, has had a checkered career in our schools. Latin has always been a compulsory subject for matriculation into our Universities, but the vicious system of options introduced into Toronto University in 1885, has directly caused Greek to suffer. Within the last seven years (since 1894) Latin has been a compulsory subject in Ontario for Teachers' Certificates (Junior Leaving and Senior Leaving), and since that regulation was passed we have had a Latin revival, so far as numbers studying the subject were concerned, but the revival has not been of the sort that tends to make Latin scholars. According to the last report of the Minister of Education out of 22,460 pupils in our Secondary Schools, there were 19,131, or 85 per cent., taking the subject, an extremely large percentage. There are, however, indications that a movement is on foot to do away even with Latin for the requirement of teachers' certificates. The position of Greek is, however, very different. The system of options directly tells against it. The language is a difficult one ; it is easier to get a pupil up in French, German, or Science than it is in Greek, and as the principle of doing things with the least exertion is deeply rooted in humanity, the average pupil obeys the principle and gladly adopts the easiest method to obtain his Matriculation or Certificate. Out of 22,460 pupils in our secondary schools, only 661, or 3 per cent, are taking Greek. From our High Schools Greek is practically being banished, and even in our Universities the Greek scholar will soon be a *rara avis*. The language of the oldest democracy in the world is not democratic enough for the modern educational Philistine.

The vicious system of options introduced into the curriculum of our High Schools in 1885 has been the *fons et origo malorum*. If I may be allowed a digression, I would say that no options should be allowed in our High School course of study. The general culture of the student should be aimed at, and this can only be obtained by

laying a good foundation in subjects that admittedly form the basis of a liberal education. It is only when such a basis has been laid that the work of specialization can efficiently be begun. I may also point out in passing that we cannot substitute French for Latin, for the obvious reason that French and Latin are really the same thing at different stages, and that the training given by the one is similar to that given by the other, only in an inferior degree. Without Latin, French is unintelligible. The study of the one is supplementary to that of the other.

Now let us examine a few of the arguments made by the opponents of classical study. In the first place it is said, and I admit said with a great deal of truth, that many boys spend their time on Greek and Latin, for which they care little, and in which they make so little progress that they soon forget the little they have learned, and that much of this valuable time could be spent to better advantage in other studies. I think that I have stated the case of my opponents fairly. Now, this argument, if it has any value at all, applies with equal force to every other subject in the whole curriculum. It is quite true that the amount of Greek and Latin that some boys learn is of little value—I was going to say, of no value whatever, but I will not do that, for all knowledge is of value provided a pupil has acquired it in the right way. But the argument that is used by our friends who object to classical studies might be applied with equal force to every other subject, say Arithmetic. With the exception of the four simple rules, and perhaps fractions, what part of arithmetic is ever used by the ordinary man ? The same question might be more pertinently used in the case of Algebra, Euclid, Trigonometry, or Science. How many of our boys and girls after spending weary hours in trying to fathom the mysteries of Quadratic equations, geometrical problems, and chemical formulas for which they have little aptitude and in which they have less interest, gladly forget all these as soon as they have passed the examinations. If Greek and Latin were dropped to morrow from the curriculum of studies and all the pupils of a class were turned, say, to the study of Chemistry, we should probably find quite as many of the pupils, but not the same pupils, who would make as little progress in their Chemistry as they had made in their Latin and Greek. We are all

painfully aware that in every school there are laggards, scholars who will do no more than their allotted task, and will even do that grudgingly, but it surely does not follow as a sequence that the interest of the bright boy or girl who has an aptitude for languages should be sacrificed merely because dull boys in the class have no taste for these studies. My experience, after nearly thirty years of teaching in our High Schools and Collegiate Institutes is this, that the pupils who excell in Greek and Latin often surpass the other pupils in their own special studies if they devote their time to them.

In the second place, we often are met with this argument which though it has again and again been refuted is still used by some. We are often told that the study of English in itself will do all that is claimed for Greek and Latin. As a proof of this we are reminded that the Greeks who admittedly excelled in literature and philosphy, studied no language but their own, and the conclusion is immediately jumped at that it was by cultivating no other language that the ancient Greeks attained their pre-eminence in literature and philosophy. This argument is absurd as the foregoing. We might point out.

First, that the Indians of North America, the Eskimos of Labrador, and the Hottentots of South Africa knew no language but their own and yet they have never developed either literature or philosophy.

Second, that the Greek language attained its perfection in the age of Demosthenes, say 340 B. C. and the grammatical study of Greek began in the time of the Alexandrian grammarians, that is fully a century later. It follows, therefore, that all the greatest writers of Greece—Homer, Pindar, Æschylus, Sophocles, Euripdes, Plato, Aristotle, Demosthenes—did not make their language by studying Greek alone, or in fact by studying it at all.

Thirdly, we might answer that no language is consciously made by the people who use it. Language is an unconcious growth, not a manufactured article. Men must first think clearly before they can express themselves clearly, and the language of Greece is what it is, the noblest expression of human thought; not because the Greeks studied no other language but because the men who used it as the vehicle of thought were themselves great and lofty in conceptions. We shall have to seek for other reasons, if we can find them, to account for the expressive power of the Greek language. It seems to me as impossible for the fine æsthetic taste and speculative genius of the ancient Greek as it is to account for the practical genius

of the ancient Roman for law and government, or for the genius of the English nation for colonial development. All that we can say is, that these nations have in themselves the essential germs that developed into qualities for which they have gained their pre-eminence among the nations of the world.

Now let us examine what advantages the study of Greek and Latin confers. To me the most important is that we get a greater mastery over our own language. When a boy begins a language his first concern is to get a good vocabulary. Every teacher of Greek and Latin will draw the attention of the pupil to derivative words in English. Does not this acquisition of a vocabulary cast a flood of light on the meaning of English words? This I contend is the best method of making the teaching of Greek and Latin eminently practical even in the initial stage of the study. The pupil increases his vocabulary of English, he gets a deeper insight into the meaning of words, his mental vision is enlarged and he gains power in expression. Now all these advantages, I hear one say, can easily be got by learning a few roots and thus we will save time while we arrive at the same result. I very much doubt this conclusion. My experience with a large number of scholars has been this, —that a scholar who has studied his Latin and Greek will grasp the meaning of English words derived from these two languages and will distinguish the shades of their meaning much more readily than the scholar who has only a smattering knowledge of root words. It seems superfluous to point out that a very large percentage of words is derived from Latin and that nearly all our scientific terms are borrowed from Greek. To one who is about to take up a scientific course a short and safe cut is to obtain, in the first place a good working knowledge of Greek. There can be no doubt about this fact. Take any medical book, any work of Geology or Physics, and open it at any page, and you will see the force of this contention. Much of the difficulty of Science disappears to one who has a knowledge of its nomenclature. The same may be said with regard to Theology. If we leave out Law, the stock vocabulary of which is English or English with Latin elements, there is not one of the learned professions that does not include words formed from Greek elements, and the technical terms used in these professions have an abiding meaning to one who knows Greek. To a student, on the other hand, who knows only a few Greek roots, the terms will not be clear, for a vocabulary becoms fixed only in the mind by constant

repetition and not by memorizing a few isolated root words. Thus even in the initial stages of the classical languages, the student receives a practical benefit even if he gets no further than acquaint himself with a good vocabulary, and even though he never reads a classical author.

After a pupil has passed the elementary stages and acquired a knowledge of inflections, the advantage of the study gradually widens. He now enters upon the important stage of translation. In doing his task, the pupil has a grammar and dictionary on the one hand and his own ability on the other. The real struggle now begins. His accuracy of knowledge is tested by his grammatical skill in unravelling difficulties of the author he is translating. He is obtaining the best training he possibly can obtain, even in English, by being compelled to discriminate the meaning of synonymous English words that may be given to his Greek and Latin words in the dictionary, even if his author may have a special vocabulary. He is compelled to use in short the two great factors that enter into all education, observation and reflection. Slipshod expression, and, still less, slipshod thinking will never enable a student to understand the meaning of an author. Not only must he understand the meaning of every word and phrase, the relative connection of each, note emphatic positions, but the Greek and Latin form of the sentence—especially the Latin—must often be put in a different mould from that of the English. He has an unceasing variety not only of constructions in the same sentence but in authors like Thucydides and Livy the ever changing periodic sentences which must be broken up to conform to the direct expression of the English. The mind of the pupil is thus kept from the beinning to the end of his exercise in a state of alertness which acts as a whetstone to his mental power. In short he is taught the importance of precision in both thought and expression, he is acquiring form and style and is laying on a sure basis the greatest of all accomplishments—the ability to express himself in his own English with distinctness, clearness and effect.

In the June number of Scribner, George F. Hoar, a member of the United States Senate, one well qualified to speak on this topic, has given excellent testimony in favor of classical studies. "In my opinion," says he, "the two most important things that a young man can do to make himself a good speaker, are, first, constant and careful written translations from Latin and Greek into English; and second, practice in a good debating society." He then mentions the

great parliamentary orators of England who were nurtured in the palmy days of classical education, and ascribed a great measure of the success they attained to the training they received by pursuing the studies of Greek and Latin—Chatham, Pitt, Fox, Bolingbroke, Palmerston, Canning, Earl Grey, Marquis of Wellesly, Gladstone.

The next step that the student takes is still more difficult than the former. He has been taught to apply his gramatical knowledge to translation from Greek and Latin to English, and is now made to translate the English into Latin and Greek. This is a difficult task and it is the difficulty of the task that makes it an effective training. According to Solon the Athenian, χαλεπα' τα' καλα' "All fine things are difficult." You all remember in that interesting story of Ian Maclaren, "Beside the Bonnie Briar Bush" how unerring Domsie the Drumtochty Schoolmaster scented out "the lad o' pairts" George Howe, from among the other scholars of the parish school. After telling the leaning that Domsie had to the classics and the professions, though he was catholic enough in his tastes to allow a pupil who had no tastes for classics the alternative of studying beetles, Maclaren continues. "But it was Latin Domsie hunted as for fine gold and when he found a smack of it in a lad he rejoiced openly. He counted it a day in his life when he knew certainly that he had hit on an other scholar, and the whole school saw the identification of George Howe. For a winter Domsie had been 'at point,' racing George through Caesar, stalking him behind irregular verbs, baiting traps with tit-bits of Virgil. During these exercises, Domsie surveyed George from above his spectacles with a hope that grew every day in assurance, and came to its height over a bit of Latin prose. Domsie tasted it visibly, and read it again in the shades of the fire at meal-time, slapping his leg twice. "He'll dae. He'll dae," cried cried Domsie aloud ladling in the snuff. "George, ma mannie, tell yir faither that I am comin' up to Whinnie Knowe the nicht on a bit o' business." Then the 'schule' knew that" Georgie Howe was marked for College, and pelted him with fir cones in very gladness of heart." Domsie had the true teacher's instinct. To attain excellence in translating English into Greek and Latin is not an easy task. If the Greeks and Romans devoted to the study of style such labor and practice of which we have abundant ancedotes, it is not strange that we Canadians should find it a difficult task to translate idiomatic English into idiomatic Greek and Latin. We have to exercise in their highest degree observation and reflection. We must go deep-

er than the mere words of the passage we are translating, catch the spirit of the original and have a true perception of all that is excellent in both the English and Classics to make our translations adequately representative.

But, some may say, may not all the advantages arising from the study of the classics be obtained from studying French and German. It would be absurd to deny the utility of French and German, or to say one word of disparagement against the study of the literature of two nations that have done so much for the civilization of mankind as France and Germany. We, however, are looking at languages from the *linguistic* and not from the *literary* standpoint, and viewing the question from this side, I am fully convinced that no *linguistic* substitute for Greek and Latin has yet been found. The reason is not far to seek. We can easily see that the ideas of all modern languages are similar in character. The structure of the sentences especially, in the Romance Languages, is not very different from that of English. The comparative absence of inflections, and especially of mood forms, with all their niceties of distinction, compels the pupil to dispense with that constant mental tension which the Greek and Latin languages force him to exercise. French, as we have already said, is not fully understood without Latin, viewed from the *linguistic* side, and from a literary standpoint many of the best works of French literature can only be appreciated historically with a knowledge of Latin and Greek on which so many of their works are based. It is quite true that we may get a knowledge of German without studying either Latin or Greek, but how much would we miss in reading Lessing, Schiller, or Goethe, not to say German philosophy, unless we knew the fountain head from which they drew their inspiration.

Again, what has been said with regard to French and German may be said with still greater force about English. Experience goes to show that much better results in English teaching can be obtained if the pupil has a knowledge of some other language than his own. In fact, I venture to say, that except in the case of exceptionally gifted minds, the study of one's own language, whether it be French or English, is utterly inadequate as a mental discipline. The average pupil whose interest must always be considered as paramount reads his English or French with facility, and it is this very facility that is fatal to reflection. He is quite content with the general sense of the passage, he seldom stops to weigh carefully the

words or phrases, he pays little heed to the structure of the sentence provided he grasps the idea; shades of expression and distinctions of synonymous words escape him entirely, and in fact he often loses the whole force of the author. His reflective faculty is not exercised.

It is entirely different in the case of a pupil who has acquired this faculty from the study of Latin and Greek. Every word must be weighed, every phrase considered in construction, every difference of idiom noted, and the general meaning of the passage fully comprehended. But in a more important sense is the study of classics valued, for without such knowledge we cannot understand fully the best in English literature. According to one of the best authorities, the late Professor of Poetry in Oxford, "the thorough knowledge of English literature . . . . is hopeless unless based on an equally thorough knowledge of the literature of Greece and Rome." Professor Gildersleeve, of John Hopkins, has also well said, "Until we can disentangle from the growing structure of to-day the fibres of the far-off centuries ; until we can draw out from our own lives the warp of the loom of time, we cannot attain to any high culture without an adequate knowledge of that world of the ancients to which we owe so much." English literature begins with Chaucer, "the well of English undefiled." His poetry was directly derived from classical sources, and is not historically intelligible without reference to the fountains from which he drew his inspiration. Our great epic poems are moulded on the epics of Greece and Rome. The same may be said of didactic poetry. Of our lyric poetry one kind springs from Pindar, another from Horace, and another from the Choral Ode of the Attic dramatists. To Horace and Juvenal our satire is indebted, to Horace our Epistles, and so we may go through the whole range of our literature. Take the work in literature read this year in our High Schools—Shakespeare's "Julius Caesar," Milton's "Paradise Lost," Tennyson. Could any one catch the full meaning of Shakespeare's play without a knowledge of the life and times of Caesar, or explain the allusions or even the language of Milton without reference to classical mythology or idiom ? How much of the spirit of the "Lotus Eaters" and of "Ulysses," and especially of "To Virgil," in Tennyson would be wasted unless the pupil had gained some idea of the spirit of Homer and Virgil.

We are constantly told of the utility of Science. Now we friends of the Classics have no quarrel with Science, We rejoice at the marvellous growth of the scientific knowledge of the past cen-

tury, and we trust that in the present century still greater achievements will be in store. The rapid development of our commerce and the opening up of our mines have given an impetus to our scientific schools. But often with all this the most erroneous conclusion is reached, that scientific training is valuable to the ordinary pupil as well as to the student who is going to be, say, an electrical engineer. The utility of scientific studies can only be valuable to the technical worker. All cannot be engineers any more than all can be College Professors or Ministers of Education. While we admit the utility of scientific training sufficient to enable us to understand the methods by which scientific work is carried on, it is absolutely absurd to expect that we all can be or should be scientists. It would be well for our educationalists to see that both Science and Classics are retained in our curriculum of studies. There should be no discord between them, but I venture to assert that if the scientific side of our education is pushed too far we shall see a revolt against Science. The only claim that a subject can have a place on the programme of studies is not its utility but the training it gives. So far as the average pupil who is not to be a technical worker is concerned, he gets from the study of Latin and Greek all the training he can possibly get from pursuing a scientific course, that is, correct observation and correct inference with this vast advantage that he gets besides the power of expression which a scientific training lessens rather than increases.

The subject of this paper is "Should Greek and Latin be retained as subjects in our Secondary Schools?" As I have already said I do not believe in options ; Greek and Latin cannot be separated without a grevious loss to both. In language, history and civilization modern Europe rests largely on Rome. Roman civilization, however, still more largely rests on that of Greece. It was only after the Romans conquered the Greeks that Roman literature took its rise. Without a knowledge of Greek literature, the literature of Rome is utterly meaningless, for nearly all the best in Roman literature is only a faint reflection of that of ancient Hellas. We cannot understand Lucretius without the Epicurean philosophy, Virgil without Homer, Horace without the Greek melic poets, Cicero as an orator or philosopher without the master pieces of Athenian eloquence or philosophy. Roman history too is based on Plutarch, Diodorus, Palybius and other Greek historians. We might go through the whole list of Latin writers and we would find that the

Greeks were their masters. The two nations were linked together and the two languages should not be separated in education to fully understand the civilization of the ancient world. It is a sad loss to our country that the study of Greek is neglected. It has had in the past, as I have pointed out, a struggle for existance and seemingly "the time of its departure is at hand" unless some help comes from an unexpected quarter. I trust that something will be done to put the study on a footing more secure than it is at present. Latin must be retained and should have a more important place in our studies than it has. If Canada means to take a position among the great nations of the world let her prize the intellectual discipline that the study of Greek and Latin confers and not exhibit the utilitarian spirit which is too manifestly the goal of present educational tendencies.

MODERN GEOMETRY.

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What is Modern Geometry? We might define it as all that Geometry which was unknown to the ancient Greeks, for in this connection other ancient nations may probably left out of count. Such a definiton, however, would include whole fields of geometry upon which I have no intention of entering.

Besides, Modern Geometry, deals with the same subject matter as ancient geometry and differs from it principally in regard to its fundamental ideas, its processes and that extreme generalization which is characteristic of all modern mathematics.

Modern Geometry is the natural outcome of geometrical thought carried on in the modern progressive spirit, and is no new thing, but the accumulated results of the geometrical work of such men as Gauss, Standt, Legendre, Monge, Poncelot, Charles, Cremona, and many others.

Among these pioneers you look in vain for any English name, for there are none worthy of mention. For some centuries past it appears to have been the prevailing opinion in Great Britain that

there could be no logical sequence in geometry except that given by Euclid, and that no methods of operation were allowable outside of those employed by Euclid. And volumes of rubbish have been written, chiefly by Englishmen, in support of those ideas.

In fact, the English mathematician of the 18th and earlier part of the 19th century was so lost in admiration of Euclid and Newton that he assumed that these two great men had completed the whole fabric of mathematics, and that there was little, if any more to done, or he was too busy doing homage to his heroes and writing commentaries on their works to observe what was going on about him.

As a consequence, and to his loss and lasting disgrace, he allowed the French and German geometers to leave him far behind in the race ; and no English name can be placed by the side of these which I have mentioned as being equally or similiarly connected with the great advances which have been made in geometrical thought and methods during the past two centuries.

Even yet Cambridge, the centre of English mathematics, still clings to the old Greek methods and dictates the character of the geometrical teaching to the whole of Great Britain ; although an important association of about four hundred members known as the "Association for the Improvement of Geometrical Teaching" and numbering in its ranks some of the first teachers in Great Britain has for years been agitating for some radical reform in the methods of dealing with elementary geometry so as to bring it into closer relationship with modern thought and modern usage.

And it would appear as if Cambridge dictated to Greater Britain also; for it is as difficult to get any geometry outside of Euclid, introduced into the elementary and intermediate education of Canada as it is into that of England. And even in the higher institutions of this country, Queen's University is the only one, as far as I am aware, which adopts modern methods almost exclusively and in saying this I do not mean co-ordinate methods, as some people may suppose, but modern synthetic methods as applied to elementary geometry. And when my little book on Geometry was published it was viciously attacked by some Canadian teacher under an assumed name, and the Minister of Education was warned against allowing the introduction of such a book into the schools. The poor fellow might have spared himself the trouble, for whatever books I have written have been for my own purposes and not with the remotest expectations of their being introduced into Canadian

schools or colleges. For I feel, and many intelligent teachers in this country as well as in England feel, that however complete and finished Euclid's work may be in itself, it forms but a poor introduction to that line of thought which is most prominent in developing the the geometry of the present day; for although the methods of the Greeks are to be praised for logical presentation and vigor of demonstration, yet, as Prof. Cajori has said, they are not capable of advancing geometry much beyond the point where the Greeks left it.

And even the Greek mind, in its progress, would have found it necessary to discover or invent new methods of dealing with the many problems which pressed for solution.

Moreover, we who believe in modern methods have no quarrel with Euclid or his work, but many of us are aware that the work was never intended to be a text-book on geometry, but a philosophical system pursuing the most direct line from elementary concepts to the goal to be reached, which seems to have been the properties of the three round bodies and of the five regular polyhedra, for these, to the ancient philosopher, appeared to have some relation to the great problom of all philosophy, the problem of the universe.

Those conversant with Euclid's work are aware that it is an exceptional case for him to prove any theorem which is not subsequently required in the proof of some other theorem in his chain. Thus he omits altogether one of the conditions of congruence in triangles because there was no after necessity for it, and thus makes his discussion on congruence incomplete. But many of the most important theorems in the practical application of geometry are not in Euclid's path, but lie in the border lands on either side.

Again, Euclid's work, while being very largely metric in character, is so indirect in its results as to be applicable only with considerable difficulty to the practical subject of mensuration; and in the large and constantly growing subject of descriptive geometry, it is singularly deficient. Thus the properties of the centroid, the orthocentre, the in- and ex-centres of a triangle, are none of them present. Of course this is not a defect in the work when we consider its purpose; but it is a grave defect in any text-book on Geometry.

In order to overcome these difficulties as far as possible under the circumstances and introduce modern ideas into British Geometry, it is customary for recent British writers, as Hall Stevens, McKay, etc., to supplement Euclid's work by sandwiching in, here and there, such certain notions and results from modern geometrical

methods as to them appear to fall most readily in line with Euclid's reasoning. To me this is very much like putting new wine into old bottles, for certainly Euclid would not know his own child in this modern dress, while the real logical sequence so characteristic of Modern Geometry is lost.

Thus some of these writers will tell you that the square of a + b is the algebraic analogue of the 4th prop. of the II Bk. of Euclid. This is an assumption which is true only under certain interpretations and the proof of which requires the subject matter of Euclid's 6th Bk. To the modern geometer, however, that is. to the student who has followed modern principles of operation from the beginning the square of $a + b$ is not the analogue of Euc. II. 4, but *is* that theorem expressed in a symbolic form.

Having now endeavored to make plain my general position in regard to Euclid, let me enter somewhat into details.

Euclid places all the definitions required for his first book at the beginning, while the modern method is to introduce and define terms throughout the work as they are needed, and as is done in all the other sciences. The advantage of the second method must be apparent to every one.

Again, Euclid begins with the use of the circle to construct an equilateral triangle. Passing over the legitimacy of this operation, one of his commentators says that Euclid permits the use of the ruler and the compasses, and then seeing that if these were so,the 3rd of the I book would not be necessary,he infers that the compasses are supposed to collapse whenever removed from the paper—which is simply a piece of rubbish.

Euclid knew as well as we know that the practical construction of any geometrical element is impossible, and that just as it is necessary to admit the truth of certain theorems called anxioms before we can even begin a demonstration, so it is necessary to admit the construction of some geometrical elements before we can undertake to construct others, and in asking his readers to admit the possibility of constructing the line and the circle he selects the most useful and obvious elements which he can employ.

Approximately a circle can be constructed with great accuracy, but what of the line, which is but another name for our commentator's rule? No geometric means were known to Euclid by which even theoretically to draw a straight line, nor to any subsequent geometer, until Peaucellier invented that piece of link-work called a cell, which draws a line by a combination of circular motions.

For my own part I cannot see that there is any necessity in beginning a course of geometry to mix up constructive geometry with descriptive, and considering the general fundamental difficulties of constructions I do not believe that it is the better way. We do not found our arguments upon constructions but on definitions and hypotheses. Thus we can prove by superposition that a given finite line has one and only one "middle point" as soon as we have defined what we mean by the term middle point, and we thus enter into all properties of this point without considering any graphical means of finding it. Similarly we define a right angle and perpendicular lines, and we base our geometrical arguments upon these definitions and not upon any construction for obtaining a right angle, or for drawing one line perpendicular to another.

There is no doubt that constructive geometry forms an excellent exercise for the student, and in the advanced parts of the subject may lead to new and beautiful theorems, or to other important constructions. But it serves its purpose best as an exercise when the student has acquired a sufficient mastery over elementary principles in descriptive geomety to enable him to make some choice of method and display some ingenuity in his constructions. The mere learning of a construction from a book, and where no important principles are involved, and no extensions are in view, is of very little educational value.

Starting with the first principles of the science, I believe that all our knowledge is derived from and based upon experience and that, what we call our intuitions are but the inherited experiences of the human race. Hence I hold that pure abstractions form poor and unsatisfactory beginnings, however useful or necessary they may be thereafter, and that in establishing first principles we should, as far as is practicable, go back to experience.

Now how do we produce a line, straight or curved? By placing the point of a pen or pencil on a sheet of paper and moving the point in contact with the paper. Hence the point which traces the line is a generating point, and the line traced is its locus. And therefore a line, without any restrictions, is the locus of a generating point. This way of looking at the matter has very many advantages, and the words locus and its plural loci are continually used in modern geometry. The line thus obtained is not a geometrical, but a physical line. The relation of the geometrical line to the physical one is obvious, for the geometrical line is the limit of the

physical one, as its breadth is continually diminished. Clifford says that a line is the edge of the black band which we make by drawing a pen across paper ; but he admits that this is not a good working definition. Euclid's definition, that a line is that which has length without breadth is too abstract and is impossible as a clear concept, as there is nothing to be conceived.

Besides, length alone is not practically what constitutes a line, as it must at the same time have both direction and position.

The definition which I have given appears to me to cover the whole ground. No person ever thinks of a line as length only, for in his mental consciousness there is always present the idea of a something, as attenuated as you please, which extends from point to point along the line. And in the definition the physical line passes away into the invisible, but whether visible or not, we retain a consciousness of a something which passes along the physical line and being directed by it, but forming no part in its breadth, is the geometrical line.

This gives not only a real concept, but a true one, which includes along with the idea of length those of both direction and position ; and the definition is logical, in so far as such a definition can be, in that it is in accord with experience, it possesses the required accuracy, and it leads readily to the only conception of the line which our finite faculties are capable of comprehending.

In regard to space, Euclid and all geometrical systems known as Euclidian assume that space is homogeneous and that consequently it is infinite, and that the properties of a geometrical figure are independent of its position in space. This is equivalent to saying that what we call a straight line has necessarily no termination, but, as we say for shortness, extends to infinity and cannot return into itself ; also that parallel straight lines never meet, or what is equivalent and in some respects better, parallel lines meet only at infinity. This term " infinity " must be taken to meet a property and not a place, and its use may be illustrated thus. Let A and B be two finite points through which two lines pass which meet in P. Then if P is moved away the lines tend towards parallelism ; but however far P is moved away the lines can never pass parallelism. Therefore parallelism is the limiting condition of the lines as P goes to infinity. The use of the term as thus illustrated is common in Modern Geometry, and is exceedingly useful and suggestive.

Of late years, through the advances made by Riewan, Helmholtz and Clifford, speculative geometry has entered upon an enquiry in regard to the necessity or the validity of the Euclidian assumption, and, in fact, upon several different assumptions in regard to the nature of space.

In this new space some of Euclid's fundamental principles and axioms would be invalid, inasmuch as in this space parallel lines might necessarily meet, and what we call a straight line would be an impossibility, and every line might return into itself.

I admit that it is possible that our minds can not comprehend the possibilities of the universe, and that the Euclidian idea of space may be false, but I believe with Clark Maxwell that, whether the Euclidian assumption be correct or incorrect, space as a mental concept is necessarily infinite, and that that is the only concept which, taken as a geometrical basis, satisfies the mind.

I have dwelt somewhat on this subject for two reasons; first, the validity of the principle of superposition which Euclid has used so sparingly, and which he might have employed so much oftener with advantage, depends upon the Euclidian assumption of space ; and, second, since in any space not Euclidian the sum of the angles of a triangle is not two right angles, some authors are of opinion that this should be pointed out even in elementary books, and that it should be stated as a fundamental principle that either the sum of the three angles of every triangle is two right angles, or the sum of the three angles of no triangle is two right angles, and that all geometry involving either of these statements as a necessity should be dropped.

From this latter view I totally dissent. To mature minds exercised in all the fundamental principles of the subject such speculations in spherical and pseudo-spherical space may prove to be both interesting and profitable.

But if geometry, as presented to beginners, cannot be placed solely upon that rational basis which is in evident conformity with the powers and limitations of the human mind, it can be productive of nothing but bewildering confusion.

Let us consider some other fundamental ideas. Euclid says that a straight line is one which lies evenly between its extreme points.

But the meanings attached to the principal word "evenly" of this definition, are almost as numerous as the commentators on

Euclid's works, and if these are not agreed as to the idea in the Greek mind it is not likely that our youths can make much out of it.

A better working definition, and one that would have saved Euclid some theorems is that of the Pythagorean school "that a straight line is the nearest distance between its extreme points," for this seems to be self-evident even to some of the lower animals, and it is certainly intelligible. Of course it partakes of the nature of an axiom, but probably not to a greater extent than that of Euclid.

The preceding definitions are both faulty, from the fact that the straight line, proceeding as it does in both directions to infinity, has no extreme points, and should be defined without any reference to such points.

How then can a straight line be defined. Of course it is not possible to define all the primitive concepts of the mind and straightness is one of these. And yet every person who has come to the years of maturity knows well what it means. What we want for our purposes is a working definition, that is, a definition which we may advantageously employ in our geometrical work, and which, at the same time expresses the proper idea. Now direction is an indefinable idea, and so also are length, weight, etc. in the absolute, and yet everyone knows what the word direction means, and what is meant by the same direction, by different directions, etc., just in the same way, and just as clearly as he knows what is meant by the same length or different lengths. Then considering that the only thing that we can predicate about a straight line is direction, we may define a straight line, or simply a line by the statement that it is "a line of which every part, however small, has the same direction."

Then a curved line, or a curve, is "a line of which no two adjacent parts, however small, have the same direction." And thus the generating point of a line moves on without any change whatever, while the generating point of a curve is continually changing its direction.

This definition is logical as it expresses the fundamental property of a straight line in the most direct manner possible, and it is a good working definition as we shall see. We shall now confine the word line to a straight line.

It is self-evident, therefore axiomatic, that two distinct lines cannot pass through the the same point and have the same direction.

It is evident then that two lines which have the same direction are parallel; for if they must meet at any finite point they cannot have the same direction at that point, and therefore the one or the other must have changed direction in some of its parts and is therefore not straight and taking the illustration of parallels given before it follows that a system of parallel lines have a common point at infinity; a theorem which gives the logic of the vanishing point in perspective, and which is of frequent application in higher geometry.

Next consider angle. Geometry has two and only two fundamental conceptions, length and direction, or, to put it mechanically, transference along a line, and rotation about a point, and these two are quite independent of one another. No amount of transference along a line will produce rotation of a line, and no amount of rotation about a point will produce transference of the point. The independence of these conceptions is patent to every person who thinks upon the matter, and the reduction of all geometry to these two is well exemplified in De Moivre's formula, of resulting geometrical treatment of the complex variable, and still better in the related quaternion method where in all relations are expressible as functions of tensors and versors, while these in themselves are so distinct as to be subject to different laws of transformation. Just as length is measured by the translation of a point along a line, so angle is measured out by the rotation of a line about a point. The analogy, which falls under the general head of polarization, is complete. But as translation and rotation are totally distinct, except at the order limit, it follows that angle can be measured only by angle, and length only by length.

The separation of these two conceptions has been one of the great strides in geometry, and you who have read old works on trigonometry, such as Vince's, are aware of the great simplification effected by leaving out the ubiquitous R for radius, and thus relegating length measures to their proper place.

Hence it follows that an angle is not the opening between two lines, nor, as one writer says, the pointed piece of plane lying between the lines, nor even the inclination of one line to another unless you define what you mean by inclination, but it is simply a difference in direction, and when any two lines differ in direction they form an angle with one another, and this definition applies as well in space as on the plane. So, metrically, the angle between two lines is also the amount of rotation which will bring one line into the direction

of the other, and this can be measured in terms of rotation only, and from the homogeneity of space this rotation may take place about any finite point. And hence this definition gets over the difficulty of Euclid's 12th axiom and of that of every emendation of it which has from time to time been proposed.

It has been charged, and quite properly, as a weakness in Euclid's work, that he has employed the terms *equal finite lines*, or line segments, as I prefer to call them, and *equal angles*, without defining the word equal as employed here, in a double sense.

Now this fact should be prominently put before every beginner in geometry, that superposition is the ultimate resort, the final court of appeal in geometry, and that out of it, as one of the undeniable facts of our sense experience, grows the whole structure and system of the science.

Equal line segments are those whose end points can be made to coincide by superposition; and equal angles are those whose arms may be made to coincide by superposition and these definitions are logical and sufficient.

Euclid does not employ superposition as much as he might, nor as much as I think he should. In many places in his first book, as in the celebrated *pons asinorum*, the theorem concerning equality of parallelograms and triangles with equal bases and altitudes, and in other places he might have employed this method with marked advantage over the ones followed.

In his second book he employs superposition to some extent, but not always as happily as he might, as his eighth is clumsy, and his ninth and tenth may be proved by superposition much more conveniently than by the methods given.

Rotation in a plane is an operation which necessarily has a cycle, the rotating line returning, after a time, exactly to its initial direction. This cycle is a natural measure of angle, and you can call it by what name you please. Halsted calls it a perigon, W. B. Smith a round angle, and I call it a circumangle. Then the straight angle is defined as half a circumangle, and a right angle as half a straight angle, or as quarter of a circumangle.

This certainly makes all right angles equal, and provides that four right angles with a common vertex fill the plane, and thus avoids a weakness in Euclid's definition, for while he says that all

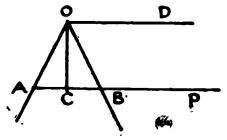
places for forming prejudices. The element of truth in this startling statement struck me most forcibly at the time, and in the twenty years that have since elapsed, I have been more and more impressed by the statement, especially in relation to the teaching and study of history. And though it may be true in many cases that the prejudices were not originally formed in the school, yet the lamentable fact remains that when the schools have not actually cultivated those prejudices, they have often done little or nothing to remove them.

And first with regard to prejudice against foreign nations. In the United States and in Prussia, it is openly declared that it is the first duty of the writer of the text book of domestic history and the first duty of the teacher of the subject to inculate patriotism, by which is commonly meant in those countries unbounded admiration of the home country and all that relates to it, but suspicion of, prejudice against and dislike for, if not absolute hatred of, foreigners and all things foreign. What is the meaning and the outcome of this kind of instruction in history? It means that not the truth as far as we can get it, but only partial and one-sided views of national attributes and international relations are presented; it means that the national virtues are extolled beyond measure, and the national wrong-doing, errors, faults or defects are condoned or passed over entirely, while the defects and wrong-doings of other nations are exaggerated and their excellences rarely noted; it means, finally, that when misunderstandings arise between nations, each will declare that war is unavoidable and that the sole responsibility for the war lies at the door of the other nation.

A little thinking will suffice to show what evil results would naturally follow such writing and such teaching of history. But we need not speculate on the matter. Concrete instances abound. It is admitted, for instance, by the most enlightened people of the United States that what ill-feeling there is in that Republic against Great Britain, is mainly due to the undue glorification of the United States and the misrepresentations of Great Britain which characterize some of the school histories of that country. This frank recognition of the evil is the first step toward remedying it, and it is pleasing to know that books are now being imported which treat the historical difficulties between Great Britain and the United States with approximate fairness.

In the language of Modern Geometry, we say that one point divides the line-segment internally, and the other externally, in the same manner. Division of this nature occurs in the eleventh of the II. Book of Euclid, who says nothing of the second point, and it is exceedingly common in a branch of Descriptive Geometry of which Euclid does not treat.

Again, when two lines intersect and are not perpendicular to one another, two different angles are formed, either of which may be taken as the angle between the lines. Hence in any problem where it is required to divide an angle into two parts by a line through the vertex there are always two solutions, one dividing one angle and the other dividing the other angle in a similar manner. And in Modern Geometry, these are said to divide the given angle internally and externally in the same manner.



Thus every angle has two bisectors, which are perpendicular to one another.

Let A O B be an angle, and O C, O D, be its bisectors. Draw A B so that O A = O B. Then C is the point of internal bi-section of the line-segment A B, and from analogy the point where O D meets A B, *i.e.*, the point at infinity is the external point of bi-section of A B. Hence, just as an angle has two lines which bisect it, one internally and the other externally, so a line-segment has two points which bisect it, one internally, its mid-point, and one externally, the point at infinity. And the analogies, which are very complete, are not merely a matter of curiosity, they play an important part in all higher geometry, and any system of geometry which ignores them can never be complete or thoroughly self-consistent.

Another principle, that of continuity, which is completely ignored in ancient geometry, is employed to its fullest effect in modern. I cannot enter into a detailed account of continuity or examine the several definitions which have been given of it. The following statement will serve our present purpose.

The hypothesis of a theorem usually contains a determinate part and an accidental part. And the conclusion remains unaffected by all variations of the accidental part within the range of possibility. In applying the principle, we have to avail ourselves of what the French geometricians call the sense of a line segment or an angle, and which we are accustomed to denote by the algebraical signs + and

Thus if a line-segment is considered as being generated by a point moving from left to right, it would be distinguished by one of the signs, usually +, and if moving from right to left by the opposite sign. It may be pointed out that Euclid never uses the sign minus or its equivalent, but takes his negative terms to the other side of the equation and thus deals in additions only.

As an illustration take the theorem. If a finite line be divided into two equal and also into two unequal parts, the rectangle on the unequal parts together with the square on the line between the points of section is equal to the square on half the line. Here the division into equal parts is determinate while that into unequal parts is accidental, and the principle of continuity tells us that the conclusion is valid for all dispositions of the second point of division internally, or externally, even to the limits where one of the parts is zero or infinity.

By the application of this principle, we readily see that the first three propositions of Euclid Bk. II are but one, or rather that the second and third are corollaries from the first. The 4th and 7th are one proposition, one having internal division in its accidental part, the other external; so also the 5th and 6th, the 9th and 10th, the 12th and 13th all of the second book; and a number of theorems in both the 3rd and 6th Books. And the treating of these double theorems as practically the same, and the deriving of the one from the other, is fraught with advantages which become very apparent to the student when he comes to take up algebraical and trigonometrical applications.

Again to a certain extent the reciprocal relation between lines and points might profitably be given to mere beginners. Thus, as two lines determine one point so two points determine one line; as three lines determine three points, so three points determine three lines; as four lines determine six points so four points determine six lines. He thus sees that the triangle is unique in having the same number of points and lines, and hence its importance amongst polygons. And it might be pointed out that the side of a triangle is really an indefinite line, and that a triangle might be defined as the closed figure formed by the three lines determined by three points. This avoidance of having to speak of sides produced gives the means often of making general statements instead of particular ones.

Thus if from any point on the circle circumscribing a triangle perpendiculars be drawn to the sides of the triangle, the fact of these

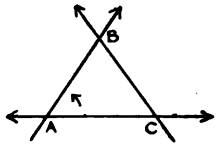
perpendiculars are in line. If any point be joined to the vertices of a triangle, the circles on these joins as diameters intersect by twos on the sides of the triangle.

If from any point perpendiculars be drawn to the sides of an equilateral triangle, the sum of these perpendiculars is constant. To find four points equidistant from the three sides of a triangle &c.

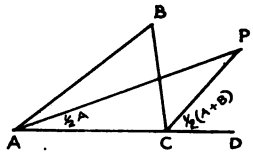
In regard to the last, just as we are able to find four points each equidistant from three lines which form a triangle, so we ought to be able to find four lines each equidistant from three points which form a triangle. Three of these are readily found, the fourth may offer some difficulty.

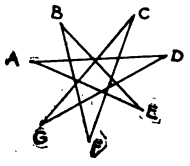
Again the principles which have now been examined and laid down lend themselves with remarkable facility to the comparison and measurement of angles, since they are practically the principles which every student must master when he enters upon the subject of Trigonometry. Thus we can find the sum of the three angles of a triangle without any reference to parallels.

Then we easily prove that if a straight line be revolved through a straight angle or two right angles, it is reversed in direction; and conversely, that if it be reversed in direction it is rotated through two right angles. Now if A C be rotated into position A B, it measures into angle A by our definition of an angle. Similarly A B to C B measures B and C B to C A measures A, and the line is reversed in direction.



As another illustration take the theorem employed in the theory of the mariner's sextant, that the angle between the internal bisector of one angle of a triangle and the external bisector of a second angle is one-half the third angle. Let A P be the internal bisector of a second angle and C P the external bisector. Then, we get the angle at P by by bringing A C into C P. But this can be done by bringing A P to A D, and rotating about C to bring A D to C P. This gives: Angle at P = $-\frac{1}{2}A+\frac{1}{2}(A+B) = \frac{1}{2}B$. Similarly in the figure given by proof the sum of the angles A + B + C &c. is two right angles.





Lastly, from the properties of the right bisector of a line-segment, we readily prove that one and only one circle can pass through three arbitrary points, and thence that a line can cut a circle in two and only two points.

This, which is important in the theory of curves, and which classes the circle with the conic sections is not proved anywhere in Euclid except indirectly.

From the application of these principles flows the whole theory of intersection of two circles and a line and circle in the simplest and most direct manner; a contrast to that given in the third Book of Euclid, which is about as clumsy a piece of geometry as one cares to pursue.

Thus a line can cut a circle in two points only, and a circle can cut another circle in two points only. When the points become coincident the line becomes a tangent line to the circle and touches it at one point which is now a double point, and under like circumstances two circles can touch at but one point and that is a double point. In this way we learn that a point of contact is a double point, or represents two points in the theory of the circle, or in fact of any other curve.

Hence, the modern definition of a tangent line is a line which passes through two coincident points on a cuve; or the secant in its limiting position when two of its points of intersection become coincident. Either of these definitions applies to all curves, while Euclid's applies to the conic sections only.

As an illustration we see that the problem to draw a circle to touch two given lines at two given points is in general impossible; for as each point of contact counts for two points this would be equivalent to making a circle pass through four given points. But a circle may be drawn to touch one line at a given point and fulfil any one other compatible condition.

From these follow in the most direct and simple manner all the commoner descriptive properties of the circle, such as: the radius is perpendicular to the tangent at the point of contact, and conversely; a radius perpendicular to a chord bisects the chord and conversely; the common centre lines of two circles is perpendicular to their common chord; when two circles touch, their common centre line passes through the point of contact; with many important relations belonging to the theory of the pole and polar.

And now, ladies and genlemen, I feel that I have occupied your time long enough and that it is proper for me to close. In what I have said I have not exhausted the subject; I have given merely an introduction. And whole departments of Modern Geometry which which flow in the most natural way out of the principles which I have endeavoured to make plain to you I must necessarily leave untouched. And particularly I would have liked to consider the subject of proportion and metrical geometry from a modern point of view, but the subject is too great for the time that could be given to it.

That Modern Geometry will replace Euclid in our primary education is, I think, not a matter of doubt, but only of time. For surely intelligent teachers will in time come to see that the great geometers of the last two centuries have not worked in vain, and that some of these have achieved a fame quite as illustrious as as that of Euclid.

I know that it is sometimes argued that in Euclid we have stereotyped system which is the same in all the schools of the country.

Such an argument is invalid. There is not a text of Euclid's work to be found in any school in Canada to-day. Changes have been introduced, frequently to suit the caprice of an editor who believed himself to be wiser than Euclid; and in one particular case and in an edition much favored in Ontario the changes are such as to falsify the logic of the subject and state untruths.

But, as long as fundamental principles are maintained with a proper degree of vigor, a little variety in treatment is by no means to be despised. We admit this in our Algebras and other books and have as yet seen no resulting evil.

As for myself, whatever respect I may have for the work and ideas of the past, I refuse to be an ancient. I am modern in all my views, and I hold that the new is, in general, superior to the old, not merely because it is new, but because the world progresses, rises upon stepping stones of its dead self, and the new has had not only all to do to build upon, it has also had more time and labor and thought bestowed upon it. And I know that the youth who becomes acquainted with elementary geomnt:y along the modern lines of its development will find the opening to the higher geometry to be not a a serious obstacle in his way but the broadening of the rill into a nobler stream, and thence onward to the deepening river.

THE TEACHING OF HISTORY.

By A. Stevenson, B.A., Pickering, Ont.

As the result of the comparative monotony of the daily routine of school tasks, there is the danger that we teachers will become mere instructing machines with little animation or power of awakening interest. The natural accompaniment of this condition of the teacher is deadly dullness and torpor on the part of the students under his charge, utter indifference to the matter of instruction and entire apathy in respect to the spirit and purpose of the subject, except in so far as this paralysis of mental activity is prevented by fear of failure on examinations. Of course, these things ought not so to be, but nevertheless, they are, I suppose, the conditions that exist in all class-rooms some of the time, and in some class-rooms, perhaps, a good deal of the time. Here is the evil, what is the remedy?

There are several preventives which you have doubtless all tried at different times with results not always satisfactory. Personally, I know of no better means of stimulating interest than the use of reprints of important original documents, such as are now published in inexpensive form under the name of the "Arber" reprints in London the "Old South Leaflets" in Boston and the "Canadian History Readings" in St. John. Here we have copies of the Magna Charta, the Petition of Rights, the Grand Remonstrance, the Scottish National Covenant, the Instrument of Government, and a considerable number of very important political papers. It would be a dull boy indeed who would not be stirred in some measure by the sight of the very words that made tyrants tremble and brought liberty to the oppressed and down trodden. Of equal value are contemporary annals such as Saxon Chronicles and Pepy's Dairy. A kindred source of interest and one which is more effective with juniors are historical novels, a good stock of which should be in every school library. If the teacher has read these and can speak appre-

ciatively of them to his students, so much the better. The historical matter in these books may not be absolutely correct in every particular, but that is true also of the matter in our text-books, and this disadvantage of reading the novels is more than compensated by the advantages. The plot, the dialogue, the description of the details of every day life and everyday characters, —these are the things that make the past live gain and almost impress us with the force of real experience.

Current history as presented in the newspapers and periodicals of to-day may be used with great effect in quickening the understanding and appreciation of the events of the past. It is true, in a certain measure, that history never actually repeats itself since the circumstances and conditions are never twice absolutely the same. But, often-times, there is enough of similarity to make the comparison both profitable and interesting as in the recent beginning of Imperialism in the United States looked at in connection with similar developments in the ancient republics of Greece and Rome. A word of warning may be necessary here. The editor of a Toronto evening newspaper said recently that a teacher of history or literature has no right to express his opinions of current events to his class. Young people, said he, should be allowed to form their opinions from the reports and comments in the daily newspapers without interference from the teacher.

Probably the most effective preventive in most cases of dullness and deadness in the teaching of history is an earnest attempt on the part of the teacher to keep vividly in mind the specific qualities of the subject as material for educative uses, and the most important ends to be sought in the development of the minds of our youth in relation thereto. Let us ask ourselves over and over again why we teach the subject at all,—what good we expect it to do.

Everyone admits the advantage of having the mind well stored with the important facts of history. A person thus equipped is prepared to carry on interesting conversation, to be convincing and successful in discussion and to solace himself in quiet reflection. But enough, and more than enough has been made of this use of the study of history.

I need not tell you that a much more important use is the training of the critical faculty acquired in discussing and weighing the evidence for and against the accuracy of the statements made by historical writers. This implies, of course, the use by the teacher, and

better by the pupils as well, of works by different authors from different points of view. Criticism of this kind is not only a valuable intellectual exercise from the outset, but the process soon passes over into the moral sphere from the fact that the pursuit of truth, of whatever kind, has a direct and beneficial effect on character.

Besides furthering the cultivation of the judicial spirit, the teaching and study of history is a most valuable agency in the development of breadth of mental vision. We learn that persons in other times and in other lands did not think just as we think, nor do just as we do, and yet were most worthy persons and deserving of all respect. What better antidote could you have to local prejudice and conceit, to parochialism and provincialism and to some of the equally narrow and false notions that are glorified under the name of Imperialism?

It is not the intention of the writer of this paper to show in detail all the pedagogical values of the study of history and the means of realizing them by the teacher in his treatment of the subject, but rather to call attention to the few facts, conditions and results that may be especially important now when as a nation we are engaged in making history at a tremendous rate both by extension of territory and by internal development.

It might easily be maintained, I think, that next to pure literature—the literature of power as De Quincey calls it, next to this, the most important subject on our High School programme of studies is history. For what is history? It is a record of the deeds and lives of men in communities and nations, the story of the tremendous impulses and motives that have influenced masses of men to action of the mighty course of that action in its wisdom or its folly and its inmeasurable import of good or evil to mankind.

We need scarcely stop to discuss the question whether there is sufficient material in the annals of men for a philosophy of human conduct that would serve to guide, not only statesmen, but ordinary citizens in conducting political affairs. It would be strange indeed if in all the infinite universe the sphere of human political action were alone outside the pale of law, if here indeed were the reign of Chaos and Old Night, dark, wasteful, wild, where there is no cause and no consequence, but things happen thus or so in dire and immeasurable confusion. The thought is irrational and atheistic.

We must rather believe that the law of causation holds no less in the lives of nations than in those of individuals, that what they are depends largely upon what they have been and what they have done, and that what they will be in the future depends largely upon what they are now and what they are doing now. Human records and Divine revelation testify that nations reap as they have sown, that national rightiousness surely exalts nations, while national wickedness just as surely brings on national disgrace and ruin.

This view of national action and character does not exclude recognition of the fact that not only extraordinary men at long intervals and in different countries, but that apparent ordinary individuals all the time and in every country, are influencing the national life for good or for evil by what seems to be individual and original impulse and motive, but which may be after all in the main the natural product of antecedent conditions and environing circumstances.

It has been well said that history is philosophy teaching by example. The abstract and comparatively lifeless principles of political and social morality discussed and formulated by the philosopher, are presented by the historian in concrete and living forms, like the men raised by the prophet's breath from the valley full of dry bones.

The wisdom that history teaches, the wisdom of the ages,—yes, that is what teachers of history need to keep always in view, if their work is to be of any special value to their pupils, or to have any special value for their pupils, or to have any potent effect in regenerating mankind. How many of us think of this lesson? Many, perhaps, most of the students that come out of our High Schools and Colleges are no better equipped by their history studies for the highest duties of citizenship than is the farm laborer or the factory hand.

It matters comparatively little what view is taken of the rest of mankind by a hermit or a castaway on a desert island. But when men come to live in communities, it matters very much indeed what view the individual members of each community take of one other and of the members of neighboring communities. The nature of that view determines the measure of barbarism or civilization. Barbarism is marked by ignorance, prejudice and selfishness. High civilization requires a broad view, sober, enlightend, tolerant, free from ignorant prejudices, and, at least, moderately just and unselfish. How much is the teaching of history doing to effect these desirable results? I once heard a mechanic say that schools and colleges are

places for forming prejudices. The element of truth in this startling statement struck me most forcibly at the time, and in the twenty years that have since elapsed, I have been more and more impressed by the statement, especially in relation to the teaching and study of history. And though it may be true in many cases that the prejudices were not originally formed in the school, yet the lamentable fact remains that when the schools have not actually cultivated those prejudices, they have often done little or nothing to remove them.

And first with regard to prejudice against foreign nations. In the United States and in Prussia, it is openly declared that it is the first duty of the writer of the text book of domestic history and the first duty of the teacher of the subject to inculate patriotism, by which is commonly meant in those countries unbounded admiration of the home country and all that relates to it, but suspicion of, prejudice against and dislike for, if not absolute hatred of, foreigners and all things foreign. What is the meaning and the outcome of this kind of instruction in history? It means that not the truth as far as we can get it, but only partial and one-sided views of national attributes and international relations are presented; it means that the national virtues are extolled beyond measure, and the national wrong-doing, errors, faults or defects are condoned or passed over entirely, while the defects and wrong-doings of other nations are exaggerated and their excellences rarely noted; it means, finally, that when misunderstandings arise between nations, each will declare that war is unavoidable and that the sole responsibility for the war lies at the door of the other nation.

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It cannot be said that either our text-books or our teaching in Canada are as one-sided. A few instances will suffice to show that there is room for improvement.

Much is made in our books of the glory, and little of the absolute iniquity of the Hundred Years' War against France. It is assumed that the war against the First French Republic was entirely justifiable from the very outset. And in the main, France is represented as the irreconcilable enemy of England throughout all the centuries. The shameless wickedness of the Opium War against China and the absolute criminal folly of the Crimean War are passed over very lightly. In regard to all the border wars of our empire, readers are left to believe that these wars always began in entirely unprevoked attacks upon us by neighboring tribes— which is quite too much for some of us to believe who have seen the kind of men that are sometimes to be found on the wilder frontiers of our empire. The invasions of Canada by the Americans during the Revolutionary War and the War of 1812 are represented as unjustifiable, being wantonly and maliciously directed against a peaceful people who had given no offence, the historian and the teacher failing to point out that there was no special animus against Canada as Canada in these movements, but that Canada was attacked solely as part of the British Empire. This comparitively unjustifiable argument for ill-will against the United States has been made much of and is being made much of under the guise of stimulating patriotism. But it is the duty of the teacher to resist this tendency, and to show that the truest patriotism on the part of British subjects is to cultivate friendly feelings towards their national neighbors.

But even when the text-books are fair and the teachers free from prejudice there is a danger that narrowness, rather than liberal-mindedness, will result from our work in history. The reason is that the field that is covered is so narrow. Perhaps not one in a hundred of the pupils in our schools ever goes outside of the history of Canada and Great Britain to that of any other modern country, either of their own volition or as a result of having their attention directed thereto by the teacher. It is inevitable that under these conditions our young people should acquire an exaggerated estimate of the importance of their own nation as compared with the other nations of the earth, that they should come to think not only that it is absolutely the greatest nation in every worthy particular, but also that all past present and future progress and enlightenment of the world have de-

pended and still depend solely upon Britain. This attitude of mind is, of course, not only wrong and foolish in itself but is sure to produce contempt and ill will from foreigners. Let me cite a somewhat parallell case. Many years ago when the American text-book by Morse was the only book on geography used in our schools, our Canadian boys were amused or irritated at what seemed the disproportionate space that was allotted to the United States, and I remember that some of us used to pity the American children because of the ignorant pride that must possess them as the result of the impressions created by that book. What would have been the condition then of the minds of the American children if their text-boods on geography had been made up of descriptions of the United States alone, with no description of other countries whatever? And yet that is about the nature of our school work in history. By the way, when Canadian text-books on geography were introduced and five times as much space given to Canada as to the United States, I do not remember that we found any fault with the allotment. But that was another matter! It is said that in China the instruction of the youth in history and geography is confined entirely to matter relating to the particular province in which the school is situated, with the result that the people of the various provinces regard one another almost as foreigners, and is explained the lack of solidarity which seems to characterize that great empire. Our schools are of course not so narrow in their range as those of China, but there is a tendency to work along similar lines and the evil might easily become as great as it is in China long before we as a nation are as old as China.

It would be impossible of course to take up with any fullness the history of foreign nations in our schools, and it is a question if much good is done by the study of such bare outlines as Freeman's general sketch. Such a book as the old fashioned Collier's "Great Events of History" would be better. But it goes a long way to prevent narrowness in our youth to have broadly read teachers who deal fairly and kindly with foreign nations, frequently going out of their way, if it could be called so, to relate or refer to characteristics and incidents highly creditable to them, or to eulogize individuals of these nations who have enlightened and elevated mankind. It would be well too, to have in the school library, translations of foreign historical romanances such as the Erckmann-Chatrian books, the reading of which would do much to broaden and deepen the sympathies of our young people. It is true, I know, that in some of these books things are

said regarding Britain, which make the ordinary British boy somewhat indignant against the writers. But that will do no harm if the boy has a teacher who will point out to him that that is the other side of the case, the French side, which he had not seen before, and that there are really two sides to all international quarrels. When a boy has learned this lesson well he has acquired a more liberal education than most persons.

It is to be feared that some of our teaching in history (and just now there is a demand for more of the kind) tends to create or confirm the impression that a narrow, so-called patriotism or loyalty is is the chief of all virtues,—a patriotism showing itself chiefly in a readiness to regard all other nations as in every way inferior to ourselves and in a readiness to go off or to call on others to go off and fight any of those people whenever any one says that the honor of our country requires it. Let our teachers recall the fact that there was a time not so very long ago when individuals consider it necessary in order to uphold their personal honor to shoot or run through some one who had offended them. We now call that murder. How much different have been many of the wars between nations, except in so far as they are infinitely worse because of the gigantic scale on which the deeds have been done?

The existence of this hostile spirit whether created only in part by the school or persisting because the school and the church do not do their duty in resisting it, renders wars "inevitable" as the term is accepted. It seems to be taken as a conclusive argument in favor of war and an all sufficient justification of it to say that it was inevitable. But what made it inevitable? Perhaps it was inevitable only in the sense that a monarch, leader, or political party had some selfish end in view and was determined to obtain that end at whatever cost, even the awful cost of war. But suppose that in some cases this selfish motive is not apparent. Then the war could be said to be inevitable only because of the unfriendly sentiments that prevail in the contending nations prior to the conflict. Here then comes in the duty of the educator whether teacher, preacher or journalist. He should try to educate the people so that wars would become less and less inevitable. He should endeavour to develop a permanent state of friendly feeling in his people toward those of other nations and should strive to prevent the growth of a spirit of arrogance and vain national self-glorification. Then when a difference should arise between the governments of nations their respective peoples instead of going wild for war, would be in a proper frame of mind to treat

the matter camly and to be willing to submit it to arbitration for settlement. With such an education as they had received it would be peace and not war that would inevitable. What greater good than this could our teachers of history do for mankind?

If there is one thing more than another that history teaches and that teachers of history should teach it is that ignorance and stupidity and misunderstanding and misrepresentation and downright unscrupulous self-seeking are at the bottom of most wars, and that judged by the wisdom of the future they seem but gigantic follies and monstrous crimes. The wisdom of the future when men have had time to think and to examine the causes and consequences, to count the small gains and the awful losses of war, not only the appalling destruction of life and property, but the misery and agony of the women and children, and the fearful heritage of hate which war bequeaths to untold generations. The wisdom of the future! Who now in any civilized country will undertake to justify the acts of his national government which helped to bring on the most destructive of wars? Of course in our wars with foreigners they also must bear blame, sometimes the greater part of it, as perhaps, say in the war of 1812. But we need not *dwell* on that fact in our teaching. Our young people will hear enough of that from other sources. What we need to regard chiefly is our own nation's share of the blame in all cases. Then when foreign teachers do their part as they are beginning to do in emphasizing the phrase of the blame that falls to their own nation, then we shall have the future generations trained to such an mood that war will be impossible.

It is the function of the historian and the teacher of history to give only the truth, and there is much material in the study of British and Cauadian history that is well fitted to serve in building up a pure and lofty patriotism. Some may consider that the way to do this is to dwell on the extension of the area of our empire by conquest or on the increase in commerce or wealth, but it would seem that it would be better to dwell rather on the condition of the people as a whole and the kind of men and institutions the country has developed. Robert Burns, as you know, in "Cotter's Saturday Night" has forcibly proclaimed the fact that the greatness and future permanence of a country depends upon the character of the common people and not upon the princes and lords and the political and social systems and conditions which they represent. And Tennyson in giving his reasons for admiring England expressly excludes wealth and area of

domain. It is for its free institutions that he praises his county and the freedom of speech there encouraged in the discussion of public affairs. True, there has been a tendency on the the part of some during the past two years to restrict that freedom. Their ideal seems to be that of the Russian statesman who declared that the whole duty of the citizen is "to pay his taxes, serve in the army, and keep his mouth shut." It is to be hoped that that theory will never get a foothold in the British Empire. For it is in the comparative freedom of speech and freedom of political action that there prevails that you have the explanation of our past end future progress. And just as soon as you limit the right to discuss public affairs or to criticize governments, you are straightway setting up a doctrine of infallibility and divine right in their behalf, which is absurd in itself and precludes all progress. As Britain is the country, where, on the whole, personal freedom is probably the widest, we may well glorify our country in this regard in our teaching, and we may glorify especially the men and the measures by which this liberty was attained and the institutions in which it is embodied. That is a kind of patristic teaching that is rational and elevating rather than blind and dehumanizing.

Remembering that Peace hath her victories no less renowned than war, and even more renowned as some of us see things now-a-days, the teacher of history will dwell strongly on religious, political and social forms and the men that brought them about, all the theories and doctrines, all the works of art, and creations of literary genius that have helped to eradicate more and more from our natures the qualities of the ape and the tiger, and have helped to raise man more and more into the Divine likeness; and finally, on the great inventions and discoveries that have helped to make the lives of the people more endurable and more enjoyable and to raise their existence above that of irrational animinals.

It is reasonable that we should be moderately proud of our country as the birthplace and home of Watt, and Stephenson, and Arkwright, and Wedgewood; of Reynolds, and Turner; of Chaucer and Spenser, and Shakespeare, and Milton, and Wordsworth, and Burns and Browning; of John Locke, and Carlyle and Ruskin; of Wilberforce, and Howard; of Adam Smith, and Cobden, and John Bright; and of the uncounted host of nameless men and women, the mute inglorious Miltons and the village Hampdens, who lived the life of the spirit and held fast the high ideals in the midst of evil and per-

verse generations, who at the cost of their earthly possesions, even of their liberties and their lives gained for us the main share of that freedom and enlightment which are to-day the most precious of our national possions. These are the men who have made our country great by saving our people from the power of their worst enemies—not foreign nations, but their own ignorance, superstition, bigotry, brutality and vice.

In our teaching of history it would be well always to impress on our young people that these are the men who have done the most for us by helping to make life worth living, and our own country a place where it is worth while to live. But let us not be so narrow or for forgetful as to neglect to teach also that we owe much of our great heritage to men of other nations and other lands, to Egypt and Judea, to Greece and Rome, to Holland and Switzerland, to France and Germany.

But the teaching of history should make our young people not only liberal in attitude and friendly in disposition towards other nations, but also tolerant of differences of opinion and differences of emphasis of principles among our own people. We have studied history to little purpose if we have not learned that absolute truth, the whole truth, is not in the possession of any religious sect, or political party or social set, or of any class or rank of people. Some churches and government majorities are not infallable, and it is possible for one man in the right to be a majority, of one against the whole world. The greatest heretic may really be the greatest reformer, the greatest rebel has often proved to be the greatest patriot. All Christians as a class, were all scorned and despised in the early days of Christianity, and it is very likely that some of us if we had been there would have been among the scorners. Nevertheless the everlasting truth was theirs, truth that working like the Scriptural leaven has gradually leavened the whole mass of the nations.

Teachers of history should leave their young people with open minds desiring the truth and with the wisdom of a thousand years within them. They should be like Tennyson, true liberal conservatives in the literal sense, conservative of all the good of the past, liberal towards all the possible good of the future, not merely tolerant of new theories held only by few persons, but actively hopeful for and expectant of better and better conditions in the future as the result of putting such new theories into practice.

This is the greatest mission of the teacher of history, to prepare his pupils to take an active part in the highest duties of citizenship, to give them knowledge and breadth of outlook, to train their judgement and to develop their feelings so that they may help to work out the political and social problems of the present and future to a happy issue. The greatest of those problems is the improvement of the condition of the common people, the more general distribution of wealth, comfort and happiness. There was a time in the memory of some of us when histories, at least school histories, dealt little, if at all, with the condition of the people. They were the histories of monarchs and nobles and of their intrigues and wars, the very chapter divisions being based on the lives of the Kings and in those days teachers for the most part followed closely the lines laid down by the writer of the text-book. But the publication of "Green's History of the English People" changed that somewhat, though it is to be feared that the old ideas still hold sway in some of our schools.

Now, such books as Green's and the teachings based thereon will, undoubtedly, furnish our young people with the facts, and ideas necessary to progressive citizenship. But as Aristotle pointed out long ago, knowledge alone will not develop virtue either in ourselves or in others through us. We must have a motive to action, and knowledge alone is often insufficient to supply a motive. The knowledge needs to be vitalized and energized by feeling, And the feeling that is most potent for the betterment of mankind is a broad human sympathy. Here is where pure literature, the literature of power, comes to the aid of history as the literature of knowledge merely, in developing a culture that shall be beneficient to mankind. It might be said that he knows not history that only history knows, and to attain the highest results it is necessary that the teacher of history should be widely read in other humanistic literature so that his own sympathies may be fully developed and the sympathies of his pupils also by the spirit that pervades his teaching. This effect may he deepened by occasional references to, and commendations of writings with which the students are already more or less familiar. The "Cotters Saturday Night" has been mentioned. Others familiar in many of our schools are "The Deserted Village" and Gray's "Elegy," "The Song of the Shirt," and those tender little poems, "Three Fishers," "Before Sedan," and "The Face Against the Pane." The teacher's human sympathies may also be kept active and broadened and deepened by the reading of such novels as those of Dickens and George

Eliott or of the numerous American writers of novels of a similar tone and purpose. And here and there in a variety of books occur chapters and paragraphs of a most powerful humanizing influence. Let me quote to you two short passages that have always appealed to me more strongly in this regard than any other in the whole range of prose literature.

"Cast your eyes over the world and see how the masses of men, how the majority of nations, labor not only in mental, but in moral degradation, to support a high and fine type of humanity in the few. Examine any beautiful work of art, and and consider how coarse and dark is the life of those who have dug its materials, or the materials for the tools which wrought it, out of the quarry or the mine. Things absolutely essential to intellectual progress are furnished by classes which for ages to come the great result of intellect cannot reach, and the lamp which lights the studies of a Bacon or a Leibnitz is fed by the wild rude fisherman of the Northern Sea."

"Two men I honor and no third. First, the toilworn Craftsman that with earth-made Implement laboriously conquers the earth and makes her man's. Venerable to me is the hard hand; crooked, coarse; within notwithstanding lies a cunning virtue, indefeasibly royal as of the Sceptre of this Planet. Venerable, too, is the rugged face, all weather-tanned, besoiled, with its rude intelligence; for it is the face of a man living manlike. Oh but the more venerable for thy rudeness, and even because we must pity as well as love thee! Hardly entreated Brother! For us was thy back so bent, for us were thy straight limbs and fingers so deformed! thou wert our Conscript, on whom the lot fell, and fighting our battles wert so marred. For in thee, too, lay a God-created form, but it was not to be unfolded; encrusted must it stand with the thick adhesions and defacements of Labor . . . . . It is not because of his toils that I lament for the the poor—we must all toil, or steal (howsoever we name our stealing) . . . . . But what I do mourn over is that the lamp of his soul shall go out; that no ray of heavenly, or earthly knowledge, should visit him; but only in the haggard darkness, like two spectres, Fear and Indignation. Alas, while the body stands so broad and brawny, must the soul be blinded, dwarfed, stupified almost annihilated! Alas, was this too a Breath of God, bestowed in Heaven, but on earth never to be unfolded!—That there should one man die Ignorant who had capacity for knowledge, this I call a tragedy.

How these words should stir our souls and thrill them with compassion and high resolve! They would almost seem to have come from the poor and the down-trodden themselves with the urgency of the Macedonian cry to the Apostle Paul: "Come over and help us." But our Macedonia is not in a distant country across perilous seas. It is here in our own land, as it is for all teachers in all lands where the poor suffer cruel privation and the woes of ignorance.

With mind instructed and judgment developed by a study of the facts of the past, and with spirit animated and will directed by tender human feelings kindled by teachers of broad sympathies, our young people will become more and more able and willing to do their share in furthering their Divine purposes and working out the betterment of mankind.

A STUDY OF THE ENVIRONMENT OF PLANTS.

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I have ventured to change somewhat the title of my paper from what was put down in the programme, viz: "Ecology vs. Morphology." This suggests a formal or technical treatment of plants, quite foreign to my purpose. When Supt. Goggin gave me this subject, he suggested that I should treat it from the standpoint that the life-relations of plants are of more interest to students than the details of their structure. This so readily fitted in with my own notions that I undertook the task, not however with the idea of showing that there is any conflict—which may be suggested by the title—but rather to emphasize the importance of life-relations and environment over mere structure in the study of plants. I should prefer the title "A Study of the Environment of Plants" because that best expresses the views embodied in this paper, as well as the trend of plant study at the present time.

Form and structure are not the most important things in the study of plants. But the details of structure and the analysis of plants make up the course on botany pursued in most of our schools. What should be one of the most interesting subjects is commonly treated in such a dry and uninteresting manner that students come to have no real love for plants, no interest in them, nor any real knowledge of their life-history. The cause of this is not far to seek. The subject is not presented attractively.

What is the most interesting thing in the world? Is it not life in all its wonderful variety and manifestations; and is not that life just as striking and interesting in the plant as it is in the animal? Plants are living beings, and they live pretty much in the same way that we do ourselves. They breathe, they are nourished by food. They have their activities. They reproduce themselves. The higher forms of plant life have been evolved from an ancestry of lower forms in past ages.

Too often this plant being that has a history behind it that tells of ages of conflict to adapt itself to its surroundings, to new conditions, and to struggle against adverse conditions, is treated in the class room and laboratory as a lifeless thing. It is plucked from its home in the fields; it is torn asunder and its parts studied and

named; and it is finally brought to book, and, by means of an analytical key, its name and family are determined. Then the withered fragments are strewn about the class room and at last find their way to the dust heap. The wonderful and mysterious life-relations of the plant, that should be of surpassing interest, are never unfolded to the student, who from the way the subject has been presented to him by his teacher comes to regard the plant as something whose structure and name alone are worthy of his consideration. No wonder that we hear children say "I hate botany." They have been fed upon the dry, lifeless husks; and those things that would appeal to them and arouse their interest,—the life-histories of plants, their habits, activities, associations, contrivances for food-getting and reproduction,—if woven in with details of structure would really show students that they were being brought in contact with beings whose activities and life processes are akin to our own. When students, young or old, study life and its activities and varied manifestations, their interest is assured.

I studied botany at a college thirty years ago under a very good teacher of the old school. There were casts and models and drawings of plants everywhere about the room to illustrate structure. There were plants in the laboratory for dissection and analysis. We took notes of lectures and made drawings. A very good course then when the life-relations of plants were but dimly understood. But the real interest in plants began when a half dozen of us kindred spirits at the same college roamed the fields of an afternoon and came in contact with the living plants. When I began to teach botany I wondered at the lack of interest in it, and the little real love that my students had for plants. But fortunately, I remembered that my own living interest in the science was brought about by a contact with living active plants in their homes, not by models and dying plants brought to me to dissect and name.

I have said enough perhaps to indicate my line of thought in this paper, which is to show that the life-relations of plants must be taken in connection with their structure and names to beget a living interest in the fascinating science, which if rightly studied will add so much pleasure and instruction to our lives. While there should be study of plant structure, the varied phenomena which illustrate the life-relations of plants should be constantly presented to the student in his walks to and from school, in excursions for the purpose from the open windows and doors of the class room; and these

varied life-relations of the plant should be constantly interwoven with studies of growth and structure at every step. If you ask which should come first, I would say that the life-relations of the plant should come first, last and always, and be the basis of a study of plants. In this, my fellow-teachers of the subject will see that there is no conflict between plant-relations and structure. There can be no healthy interest in the study of plants without observation and knowledge of their ways of living; and there can be no real knowledge of plants without a study of their external and internal structure.

Let me briefly outline a few of the ways in which the life processes of plants may enter into our courses of study, not for high schools alone, but in every grade of the common school.

I.—The Life-History of a Plant.

A favorite and natural way of beginning the study of plants is to grow them from seeds. In this way every stage of progress may be watched from a seedling to a ripened fruit. A course of interesting experiments may be carried on to show the work done by the plant; how it is affected by light; how it takes in and gives off water; how water is needed to maintain the firmness and rigidity of the plant: how it transforms by sunlight and leaf-green, materials from the air, soil, and water into starch; how it stores up this food for future use; how it breathes, and how it reproduces itself. These, with other processes in the life and growth of the plant may be watched in the class-room by planting seeds of the bean, pea, squash, or other annuals; and a series of investigations, carried on by the members of the class under the direction of the teacher may result in arousing an interest in plant investigation which can be increased and fostered as the years go by. Too often, however, these observations and experiments are confined only to testing the rate of growth, and watching how the development of stem, leaf, flower, and fruit proceeds. The observations on plants grown in the schoolroom are limited and spasmodic, beginning and ending with a few annuals, whose lives are tame in comparison with those plants that have to struggle for existence year after year, adapting themselves to changes of climate and season, and enduring the ravages of insects and acting as hosts for countless fungi and other parasites. To study plants in their own homes and under all conditions is the only way we can answer the question—How does a plant live? The life-

history of an oak, or elm, or pine will furnish a record not simply of growth from the seed and peculiarities of structure; it will tell of struggles with many competitors; against hardship and adverse conditions; against cold, famine, and drought—a story that will win our admiration and interest. Every boy and girl in the country ought to plant a tree and be taught how to care for it, how to read its life-history as it grows, how to learn from one plant the history of all. This would be a practical training in botany and forestry.

II.—Protection of Plants.

Another profitable field of inquiry for the students of plants is the varied means of protection which they assume to guard them from the attacks of enemies, from intense cold, from long-continued drought, and from other conditions that would be fatal to their life and growth. A study of thorns, prickles, hairs, thick growths of leaf substance, the firm coatings of seeds, makes us acquainted with adaptations which have enabled plants to protect themselves from enemies and changes of temperature. Some interesting cases of symbiosis, or mutualism, as it is called, may be traced to this protective instinct in plants. In our lichen plants we find an alga growing within the meshes of a fungus, the former supplying food while the latter furnishes a home. The little tubercles which grow on the roots of clover and other leguminous plants contain myriads of bacteria which are housed and supplied with food, in return for which they abstract from the air a supply of nitrogen for the plant. Many of our higher plants depend for their reproduction upon the visits of insects, for whom they supply nectar, the insects in return for this carrying away the fertilizing pollen. These are only a few cases of adaptations that the plant has developed in order to maintain itself in the struggle for existence.

III.—Dispersion of Seeds.

The dispersion of seeds affords an attractive field for investigation in connection with plant-life and structure. Although a plant is not endowed with the power of changing its abode in order the better to obtain food, it presents many wonderful adaptations which it has used effectively to make up for this apparently serious disadvantage. The seeds of many plants are provided with outgrowths in the shape of wings, or hairs, which enable them to be carried some distance from the mother plant, in order that they may have room and opportunity to grow. Others have hook-like arrangements which attach themselves to the fur of animals or to our clothing, and

thus are transported from place to place. Others have hard impervious coverings which enable them to be borne on water without injury, or carried for long distances in the stomachs of birds without being digested. These contributions are for the purpose of giving the plant a start in life ; for if all the young plants took root too near the parent slow starvation would be the result.

I have selected these three instances of life-relations—the life-history of a plant, means of protection, and dispersion of seeds—merely to illustrate from many other agencies that might be cited, features which plants possess that make their study so attractive and that invest them with an interest in our eyes as living, working beings. If, then, we study plants from the view of their environment and their adaptations to it, we at once establish a bond of relationship and sympathy between these "brother organisms," as an eminent botanist has termed them, and ourselves.

I fear that much of the lack of interest in botany in high schools is due to the fact that there is no regular graded work in the lower schools. If Nature-Study means anything and is to be of any educational value, it must begin somewhere and end somewhere. At present, it is left almost entirely to the discretion or the taste of the teacher whether it will be carried on in the schools or not. In one grade Nature-work will be done by a teacher who has a real and living interest in the subject. Then it will be done well. In the next grade the teacher has little or no interest in the subject, and it is allowed to drop, after a few weak attempts at book work or imitation exercises. It would be better in graded schools if one teacher were given the Nature-work in all the grades below the high school. Then the work could be carried on with advantage and continuously without loss of interest. Inspectors may give a great stimulus to the work by their suggestions and by a careful oral examination on results.

Most of the Nature-work, especially that carried on in spring and summer in the schools, will be with plants, because there is an abundance of illustrative material always at hand ; and in the country school lies the teacher's opportunity to do some excellent work? But is it done? I have found teachers willing and anxious to do this work, because of its importance, but they complain of their own lack of knowledge of the subject. I met a teacher not long ago who complained that the trustees had forbidden her to give Nature lessons on the ground that it wasted the time of the

school. I thought that the trustees must be a very short-sighted set of men not to realize the importance of such work. And then it occurred to me that the Nature work carried on in that school might be of a character that *would* waste the time of the pupils. I have seen a teacher give a lesson on plants by requiring his pupils to write notes of what he had gathered from books, or from his own experience—a one-sided affair,—and there was no plant in sight to illustrate the lesson. I can think of a teacher who knows little or nothing about plants pursuing a plan something like this :

It is a windy day in June. Tufted achenes from dandelion heads are flying about ; or, if there is a red maple or elm near, their winged fruits are circling through the air. Have some of them brought into school, ask for suggestions about the curious appendages attached to the seeds and their uses. Let the scholars draw them, and then let these seed travellers be allowed to continue their journey. The lesson which has perhaps occupied attention for ten minutes may be allowed to drop, until a stated time the next day, with an intimation that in the meantime other seeds may be examined. These may be treated in the same way, and this process of seed collecting and drawing and simple suggesting may go on for days without any information being given about seeds. The interest of the children is aroused. They are taking every opportunity to investigate for themselves. The teacher is aroused too. He undertakes the study of seeds in earnest. He has his eyes open to everything around him. He examines seeds with a lively and continually increasing interest. He *thinks* about them. He goes to books. If he hasn't the books he will invest money to get them if it takes his last dollar. And if he won't do this he is not worth much as a teacher. All this time the scholars have been investigating and the teacher has been searching and accumulating. We may assume that this teacher knew little of plants or seeds when he started this movement and simply directed and suggested up to this point. He now gives a lesson on seeds. Does he make it half an hour long, and tell all he knows? Not if he is wise. He will tell very little. With a confidence in his hard earned knowledge he will make his suggestions to his pupils a little broader, so that these youthful investigators by his wise directions and timely hints will find out for themselves as much as he wants them to know at a time ; and they will have the feeling that they are doing the work and finding out everything for themselves. This joy of discovery means fresh interest ;

and fresh interest in nature work means fresh interest in the school, and in every subject of study—if it is presented aright.

During the summer an infinite variety of seeds will be found. Some of these will be planted and will grow. It may be the seed of a maple or elm, and the scholar's knowledge of forestry wil begin. It may be the seeds of wheat; and as the youthful investigator plucks up a growing stalk from time and examines it under experienced direction his knowledge of plant life and agriculture will daily increase. His will be seeking after knowledge that will never end; because his interest has been aroused and the spirit of the investigator has been born in time.

And so we may start out to teach about plants and other subjects of nature with little or no knowledge of them to begin with.

Well, anyone can do that, I hear some one say. Yes, anyone can do it who has some of the investigating spirit; who has some love of nature and children which by cultivation will grow every day; who is not satisfied with doling out information and "talks" about animals and plants, but who is contented to go slowly, step by step, always keeping in view that training the pupils to observe, arousing the spirit of investigation, and securing sound mental training are the objects to be sought after.

A dry teacher, dried plants, and a book *may* succeed in interesting children in plants; a live teacher, growing plants, and the book of nature wide open are sure to do so.

Another point: Do we lay too much stress on collecting plants, drying them, mounting them on clean white paper and then affixing labels with scientific names? The walks that students take in collecting plants and the manual work involved in properly mounting them are of great benefit. I would suggest that the students who do this collecting and mounting be required to understand as thoroughly as possible the plants so prepared, not only their structure but their functions, habits of life, surroundings, &c. Let representative plants be chosen to illustrate certain special structure and functions. For example: a half dozen or so of species should be selected to show the ways of climbing plants and the parts developed for that purpose, —the Clematis, the Hop, Bean, Pea, Apios, Ampelopsis and others. As many as possible of the poisonous or medicinal plants, as the Lobelias, Kalmias, Wild Parsnips, Poison Ivy, Black Cherry, Green Hellebore, should be studied. It is important that the student should be made acquainted with plants that possess medicinal

qualities, most of which are poisonious in their nature. A few cereals and common grasses, many of the graceful forms of which make fine herbarium specimens, should form a part of the collection to illustrate those plants that are useful to the agriculturist, and many of the wild forms of these (wild buckwheat, wild oats and wild grasses) are important, showing the relationship between them and cultivated forms. The so-called insectivorous plants should have a place in the collection, both on account of the interest they possess and the fact that these plants make use of insects to obtain a supply of nitrogen which is lacking in the soil. Such are the Sundews (*Droseras*), the Pitcher plant (*Sarracenia Purpurea*), the Bladder-worts (*Utricularias*), the Butter-wort (*Pinguicula Vulgaris*). The contrivances of these for catching and digesting insects will be a source of the greatest interest to the plant student; and there will be no difficulty in finding the leaves and traps of these plants, and mounting them with the specimens, the skeletons of their departed insect visitors who trusted "not wisely but too well" to the allurements of their vampire hosts. Finally, as all our plants are descended from forms which once lived in the sea, the ancestors of our fresh and salt water algæ, there should be a few of these with representatives of the intermediate groups of fungi, lichens, mosses, ferns, and cone-bearing gymnosperms, to show plant evolution and relationship.

Some students may be encouraged to make a specialty of certain families or groups, and confine themselves to the plants, found in their neighborhood, of those families, such as the Rosaceæ, the Orchids, Lilies, or Ferns. The graceful forms and habits of growth of the last named family are especially worthy of study.

But I would not have students attach too much importance to mounting and labelling the remains of departed plants, even those laid out with scrupulous care, on beautiful white mounting paper of the regulation size, with epitaphs descriptive of their names and qualities. It is the growing plant full of vigor, resources, and exuberant life that we should know; and we must know them by personal contact in their homes in meadow, forest and on hill side. We must know the flowers and respect the life and beauty that is theirs—not idly picking them in admiration (?) of their colors, to throw the wilted blossoms by the roadside a few moments later. We must know about the trees,—the wind and the rain and sunshine which nourish them and give them their form, grace and color.

I think I see in the near future (perhaps it is with the optimistic eye) in every community in Canada, a few spacious acres forming a school garden, the neat school-house on one side and the teacher's cottage on the other, with an occupant directing the culture of those acres, enjoying a comfortable salary, thus inviting and *retaining* the services of men and women of culture and taste. No, no, my pessimistic friend, don't say we shall never see that! It is your wretched pessimism that is helping to delay the hour. Look forward to such a school and home with its refined surroundings, and talk less of low salaries and lack of appreciation. Lend a hand; plant a tree; plant in a child's heart a love for the beautiful, a love for plants and animals. Then the heart of the school trustee will begin to warm, and the deserts around school-houses will begin to blossom. Last winter's ash-heaps will be mixed in with the yielding soil, nourishing the rose, the clematis and the ivy in clean and well kept hedges. Beds of pansies and tulips will arch themselves about the circling walks; and the useful garden plants nourished and cared for by youthful hands will take on a more tender and luscious flavor. Then school life will have a fresh and constantly expanding interest. Its greater possibilities will come to be realized. The mind and heart-the hand and the eye, will be trained to get something greater, something better out of life; and there will come the power and intelligence to grapple successfully with some of its vast problems.

Would we teach patriotism and love of country?—then let us begin by cultivating a taste for the useful and beautiful in the school and the home, and gather something of the best in life from the genial influences of pleasant surroundings.

GEOMETRY IN SECONDARY SCHOOLS.

By A. H. McDougall, B.A., Ottawa.

A comparison of the teaching of geometry in the schools of the different provinces of Canada with that in the schools of Great Britain, France, Germany and the United States of America would be both interesting and instructive. The comparison might be extended over the relative time given to geometry in elementary, secondary and higher institutions, the subject matter taken up in each, the text books used, the methods of instructions employed and, as far as possible, the actual results attained. I have not the necessary information to make such a comparison with any pretense at completeness, nor, would it, if I had the information, be possible to do so within the limits of a short paper. It could probably only be effectively done by a special commission, appointed by competent authority or by the officials of a permanent Bureau of Education. At some future meeting of this Association, held after a bureau has been established here in Ottawa, a resolution may be adopted suggesting to the officials that the information be collected and the comparison made by men competent to do so. I may venture, in the absence of official guide or check, to surmise that the outcome of the comparison would not be in our favor.

Speaking generally, I believe that, in geometry, as in other subjects, the uniform and narrow educational organization of Ontario produces a good average of scholarship. Students and teachers are alike kept from falling below a certain standard. But, on the other hand, restrictions that are sometimes irksome and examinations that are almost ghastly in their uniformity act as brakes on the progress of the more ambitious.

The course of geometry in our High Schools generally extends over four years. The first two of the four are devoted to the propositions of the first book of Euclid with some simple deductions. For the third year books two and three are assigned, and for the fourth year book four, the definitions, but not the propositions, of book five and book six. All of the deductions are of a miscellaneous character bearing more or less directly on the propositions.

The time of the course may be varied according to the arrangement of different schools. In many of them it is limited to three years, one year only being taken for the first book. The examinations

are uniformly of two grades, one including the first three books and the other being limited by the sixth book.

The text book, Mackay's Elements of Euclid, may be described as holding an intermediate position, in the order of development of British editions of Euclid between, such editions as that of Todhunter or that of Potts, and such recent ones as Nixon's *Euclid Revised*, or Taylor's Euclid. In Mackay's edition, the form of the demonstrations has been simplified and improved but when the method of proof is changed from that of the olden editions it has generally not been an improvement. The appendices give some scattered propositions that belong to modern pure geometry, but these propositions and deductions from them have been practically excluded from the examinations.

The teacher of geometry in an Ontario secondary school walks in a straight narrow path. He has one fixed text-book, and the annual examinations place a very definite limit to his work. It includes just the propositions of five books of Euclid with some definitions and as many miscellaneous examples as may be taken up in the time at his disposal. He must do just so much, no less; in any exceptional case he can do very little more than the average. It might be deduced as a corollary from this state of affairs that the higher development of the subject would be inferior to that in countries where greater individual freedom is given to the teacher.

Some years ago, Professor Mackenzie, of Trinity University, Toronto, made same comparisons between the mathematical work, with particular reference to geometry, in the secondary schools of this province and those of England, in an address before the Mathematical and Physical Association of Ontario. His opinion is of more than ordinary importance, both on account of his special knowledge of the subject and and his experience as a student in both countries. I speak altogether from my own recollection of what he said, as I have no copy of the address with me, but in substance the contrasts that he made were as follows:—

In Ontario, the passmen, that is, those who do not pay special attention to mathematics, do better work than the corresponding class in England. On the other hand the work of those who, for any reason, do pay special attention to mathematics is more thorough and more advanced there than it is here.

The professor appeared to be deeply impressed with the difference in the latter case. To appreciate the full effect of this difference,

and its importance, it must not be considered as affecting only those students who are preparing for the honor course in the faculty of Arts in the Universities, but also the greater number who are going to the higher technical schools.

If, then, we are inferior to Great Britain, we are certainly as much, or more inferior to France and Germany in the mathematical training of special and technical students.

Of course, the obligation to consider ways and means of self-improvement does not depend altogether on the relative position of our system in any subject. Even if we were satisfied that we are second to none, or if the improvement during the past had been great, the obligation to do better would still be with us.

In the case of Geometry, that obligation is increased by two facts; that there has been comparatively little change in the course or in methods of teaching since secondary schools became generally established, and secondly there is the very strong suspicion, if not absolute certainty, that we are inferior to those countries that are generally looked on as leaders of educational thought.

Apart from any question of giving more of the time of the student to the study of geometry, there remain possibilities of improvement in school organization, including arrangement of examinations, in the methods of instruction, in the selection and extent of the subject matter assigned to secondary schools, and in the text books used.

A discussion of any one of these four phases of the subject would require a lengthy paper in itself, but my present object is only to get in some degree, a general glimpse of the situation in the hope that others may take up its more detailed discussion.

These four considerations, with others perhaps, influence our work to a greater degree than teachers of special departments are generally willing to admit. It is customary when any question of non-progress, or actual decadence of a particular subject is mentioned to point to the crowding of other subjects as if that was the all-sufficient cause of the trouble. As an illustration of the fact that time is not so very important, in comparison with organization and method of teaching, I may quote the following conclusion from Dr. J. W. A. Young's book on the Teaching of Mathematics in the Higher Schools of Prussia:

"Comparison of curricula and time schedules reveals the startling fact that in the work in mathematics done in the nine years

from the age of nine on, we Americans accomplish no more than the Prussians, while we give to this work about seven-fourths times as large a fraction of the total time of instruction as do the Prussians.

In other words, the Prussians give about 1.2 years of the nine years in question to mathematics, accomplishing fully as much as the Americans, who give about 2.1 years to the same work in a difference of nine-tenths of a year, or one tenth of the total time of instruction in these nine years."

It has often been pointed out that in teaching geometry, as in other subjects, there are two great objects always to be kept in view. In the first place it is a culture subject, more particularly, it affords a training in logical or systematic thinking. Secondly, it supplies a fund of information, having many practical applications.

Now, while we are behind the times in both respects, it is more with regard to the information side that we, in Ontario, are deficient. We may call this the less important object if you like, but nevertheless in view of the great demand for practical or technical trainlng that has grown up in the last two decades of the nineteenth century, it is an object that forces itself on the attention of the present day educator. I need not point out the different ways in which the facts of geometry, not only ancient but modern, are made use of in higher technical work. A bare catalogue itself would be a long one.

There is no subject in which the teaching of the present day is more intimately connected with its historic development than this one of geometry. To understand the state of affairs in Canada, as compared with other countries, requires a glance into the remote past. Along with Great Britain, but unlike the other countries of Europe, and the United States of America we retain the Elements of Euclid as our standard text-book.

This book was written in Alexandria about twenty-two hundred years ago, when the Golden Age of Greek geometry was drawing to a close. While a part of it, including the logical arrangement of the material and the indirect method of demonstration so frequently used, was original with Euclid, the work as a whole was a compilation of the mathematical material that had accumulated principally during the two previous centuries. It was not intended as a text-book for boys and girls, but rather as a treatise on the subject for people of mature minds with considerable previous geometrical knowledge.

As such, it was at once adopted by the Greeks as the standard text-book for the elements of pure mathematics. To quote from a German authority; "Whatever has been said in praise of mathematics, of the strength, perspicuity and rigor of its presentation, all is especially true of this work of the great Alexandrian. Definitions, axioms, and conclusions are joined together link by link as into a chain, firm and inflexible, of binding force but also cold and hard, repellant to a productive mind and affording no room for independent activity. A ripened understanding is needed to appreciate the classic beauties of this greatest monument of Greek ingenuity. It is not the arena for the youth, eager for enterprise; to captivate him a field of action is better suited where he may hope to discover something new, unexpected."

On the other hand, this same cold simplicity and logical rigor of the arrangement of the fundamental conceptions, propositions and demonstrations in the Elements account for the faith that so many teachers still have in them as a text for beginners, in spite of the defects that have been pointed out.

The clumsy system of numeration used by the Greeks was responsible not only, as W. R. Ball concludes, for the fact that Euclid commenced his mathematical course with plain geometry, but also for the form and selection of much of the plain geometry included in the Elements. He developed certain solutions by means of plain geometry that we would now solve by algebraic methods.

No advance on the results, obtained by the Greeks in Geometry was made for many centuries; and when advance did come in the great revival of geometry in the seventeenth century, it was in a different direction. Influenced by the work of Descartes, attention was absorbed in the development of analytical methods and Euclid remained as the great exponent of pure geometrical methods. The Elements were translated into English and gradually came into general use as the only authority on elementary geomentry in the English schools.

On the Continent, and in the United States, the text-book published by Legendre in 1794, was generally adopted. The subject matter was substantially the same as that of Euclid, the most marked differences being in the order of the propositions, and in the method of treating proporition. In the meantime a new science of pure geometry has grown up, much of which is of an elementary nature.

In the seventeenth century Kepler laid down the principle of continuity and explained that parallel straight lines meet at infinity, and the works of Desargues contained fundamental theorems on involution, homology, poles and polars and perspective. But the discovery of analytical geometry and of the calculus attracted the attention of mathematicians to the exclusion of pure geometry. With the beginning of the nineteenth century, pure geometry entered into a golden age of its own. Many able men have contributed their share to the advancement of the subject, and the result is the mass of material known as Modern Pure Geometry. What should be the relationship of this new geometry to the work of the secondary schools? How much of it should be used? Should it be incorporated in the text or should it be relegated to appendices?

If we compare such text-books as Taylor's *Elements of* Euclid, Nixon's *Euclid Revised*, Hadamard's *Lessons in Elementary Plain Geometry* and Niewenglowski and Girard's Plain Geometry, we find that practically the same modern material is introduced in each, with this difference, however, that in the foreign texts it is incorporated on an equal footing with the old material, the whole matter making up a homogeneous treatment of the subject, while in texts of British origin it is inserted in appendices, or as supplementary propositions or exercises.

The advantages that are derived from the use of the elements of Euclid are largely offset by two considerations. The homogeneous arrangement of the French texts gives the student a better idea of the relative value of the different propositions, secondly, as it is natural that work that is left to appendices should only be taken up after the propositions of the text itself have been learned, and as many of these propositions are obsolete, there is consequent bad economy of both time and energy in the use of the British books.

Of course, if the teacher was free to arrange his work as he found best, he could leave out many of these obsolete propositions and parts, the difficulty of which is out of proportion to their value and take up something else in place of them. But this is where the pressure of the examination system comes in. Although as a matter of fact examiners rarely ask for the more obsolete propositions, yet the teacher and the student cannot leave any of them out, as they have no guarantee that some of them will not be found on the papers.

A relatively large portion of the time allotted to geometry is thus taken up by work that might well be replaced by propositions of

greater practical importance or more intimately connected with higher geometry.

The child receives his first conceptions of measurement and symmetrical form in the home or in the Kindergarten. These ideas are broadened and made more accurate, or at least should be, by the work in connection with arithmetic and drawing in the elementary schools. Undoubtedly this previous training should be as practical as possible. By diagrams, by models, by actual measurements, facts should be made clear. The practical work, of course, should not be confined to the elementary schools. Someone has defined geometry as the art of drawing true conclusions from false diagrams.

The reasoning used in geometry, as DeMorgan insisted, is not different from that used in every other science or in the every day affairs of life. The reason why the mathematical branches are the best subjects for the study of this common method is the ease and certainty with which the results may at every stage be verified. In other subjects, deductions are frequently made that cannot possibly be verified. The reasoning is all right, but the premises on which it is founded are subject to doubt. But in mathematics the truth of one set of conclusions, or the falsity of another, may always be checked in such a way as to bring absolute conviction to the reasoner. Hence, if our students are not to lose this great advantage that the subject has, we must accustom them, by measurement, by calculation and by practical drawing to constantly check the results of their reasoning. Thus, beyond the mere acquirement of certain facts or methods of calculation, the vastly more important aim should be to give a free and enquiring bent to the growing mind; to give a sense of power to deal with practical problems and to test results.

It is the great privilege of the secondary schools to introduce the student to the more formal deductive method. Practical geometry should go along with it, each assisting the other. One of the great faults of our examination; limited work, in this province, is the almost utter neglect of accurate and neat drawing in connection with geometry. The beginning of deductive reasoning in geometry requires all the skill and patience that the teacher can command. I am not of those who would lay down a set method that would have the best effect in all cases. There are certain principles to be kept in view, the greatest of which is the self-activity and initiative of the student, and whatever formal or consistent method the teacher may

use should always be subordinate to those principles. To lay down such a rule as that there should be no text-book in the student's hands is a mistake. Give him a good text-book from the first, and let him extract his new ideas from it if he sees fit. Let the student feel independent of the teacher, with regard at least to the progress already made, and, of course, it is an equally good thing for him to be independent of the text-book. He must feel in himself the power to make deductions and to discover constructions. To attain this end in a marked degree requires the highest skill of the teacher. Not only must there be an effacement of the text-book, however good it may be, but there must also be a self-effacement of the teacher, however thorough may be his knowledge of his subject. or however great may be his confidence in his own method of doing things. The maxim, that the highest art is the concealment of art, is as true of teaching as of anything else.

While it is quite safe to dogmatize about a general principle, such as that the self-activity of the student must never be lost sight of, it is not so safe to say what particular method or instrument will best help to obtain the object in view. There are many experienced teachers who will not agree in full with the opinion of the Elements of Euclid quoted above. Descartes, Pascal, Newton and Lagrange are quoted as having advocated its retention as a text-book. In answer to the German's assertion that a ripened understanding is needed to appreciate its classic beauties, we find an Englishman who says: "The demonstrations are rigorous, often elegant, *and not too difficult for a beginner.*" These two general statements are contradictory. The truth is that both of them need to be modified. A ripened understanding is needed to appreciate some of the beauties of Euclid, his theory of proportion for example. But many of his demonstrations and the general development of the subject from first principles form, with the interest attached to historic associations, a combination of rigor, elegance and simplicity that appeals to the mind of the beginner as no other elementary text-book on the subject can do. The reasoning is clear-cut from the first and there is an absence of that confusion and verbose, partial explanation of ideas the full understanding of which can only come after much progress has been made. The trouble is that we carry Euclid too far in our course, and insist on the learning of too many obsolete propositions, or propositions that might well be replaced by others that would make more easy the connection between the elementary geometry of

the first year or two of the course and the modern pure geometry. The propositions of the fifth book have long been left out of the course on the ground, I suppose, that the method there set forth is obsolete. The results proved in that book are assumed in the subsequent one and the student is referred to algebra for the proofs. Now perhaps one-third of the propositions that we do spend time on could be left out for the same reason. The results when wanted can be obtained along lines of less resistence than Euclid used. Many of them are not likely to be ever required. It should be assumed that a very definite advance has been made by the time the student has completed the first book of the Elements. He has mastered forty-eight propositions. He has a good conception of the logical chain that links the propositions together. He has, if he has been properly taught, learned to distinguish accurately between hypothesis and sequence. He knows something about different methods of demonstration, superposition, direct and indirect. He has learned to reason for himself by means of many simple deductions that have from the beginning been taken up along with the propositions. He has acquired a certain degree of confidence in himself and in his own power to apply deductive reasoning to elementry geometrical propositions. By this time also he should have acquired some skill in making practical drawings. At first, in practical constructions, he may have been restricted to the use of the straight-edge and compasses and afterwards the set-square and parallel-rulers may have been made use of. He is now, in my opinion, about ready to abandon Euclid and take up a systematic geometry, introducing, along with much of the material found in the Elements, ideas and principles belonging to the modern geometry.

Even with the elements still in the hands of the students, changes might be made in the order of the work, and much might be left out. The second book of Euclid is a great bug-bear for many students. Part of it might be left out altogether without great loss and the remainder taken after the circle has been studied.

The second book is not referred to in the first thirty-four propositions of the third book, and the remaining three propositions are more easily deduced from similar triangles than from the propositions of the second book, so that they might be taken after some progress has been made with the theory of proportion. If the uniform examination system did not stand in the way, teachers of mathematics could be given considerable latitude in the order and

amount of the work they take up with their classes. Examination or test of the work done by the students, is of course necessary and is not in itself an evil. It is the narrowness, and consequent lack of thoroughness of the specified course and resulting examination that is objectionable. The one hundred and fifty propositions of Euclid that are specified, with the necessary illustrating examples and standard deductions take up the time at the disposal of geometry. It would not be reasonable to try to work in anything more in the time, nor would it be right, considering the pressure of other subjects to ask for more time. Improvement can only be made by re-arranging the work, or by leaving out much that is obsolete. The same energy and time that is spent in acquiring an understanding of Euclid's doctrine of equal ratios, duplicate ratios, the reciprocal proportion theorems, compounded ratio &c., and in getting up those long propositions on pentagons would give, if differently directed, a considerable understanding of the theory of transversals, harmonic ranges and pencils, loci, radical axes, poles and polars, anharmonic ratio, &c. In no other subject of study in secondary schools in Ontario has the progress been so slight in recent years as in geometry. I have tried to show that in the light of the great progress of geometry itself during the past century this slow progress in our schools is not what might have been expected. Euclid is not often misused now, as it was in former times, when the propositions were treated as mere memory work, and even the wording of the translation of the sacred text was constantly reproduced.

Even yet, however, and in the province of Ontario, teachers lay too much stress on formal definitions. A verbal formula often takes the place of the vital idea in a manner not intended by Pascal, when he recommended that the definition should take the place of the thing defined. Students may yet make such a confession as that of Professor Minchin, the writer of text-books, and teacher, when he said: "For myself, I confess that to the best of my belief, I had been through the six books of Euclid without really understanding the meaning of an angle." Modern French writers excel Euclid in his own peculiar province of perspicuity of logical sequence when they begin the development of the idea of an angle from the definition of a figure. Compare Euclid's disconnected definitions of figures and angle with the following: "A figure is any combination of volumes, surfaces, lines, and points. . . . . The portion of a right line, inde-

finite in one direction, and limited, by a point, in the other, is called a half-right line. . . . . The figure formed by two half-right lines issuing from the same point is called an angle." For two definitions of Geometry itself, which may be supposed to be suitable to different stages of psychological development, compare that given by Hadamard, "Geometry is the study of the properties of figures and of the relations which they have to one another," with one given by D. E. Smith in his book on "The Teaching of Elementary Mathematics": "The Science of Geometry is the science of certain abstractions which the mind makes concerning form."

A system of geometrical training with Euclid for its basis could be developed that would possess all the virtues of those systems that do not make use of it, but it would be better to cast aside that venerable work altogether than to have its traditions prove an incubus on the natural advancement of geometrical training.

In conclusion, let me enunciate some points on which further discussion might take place. First, we, in Ontario at least, are behind the times in geometrical training in our secondary schools. Secondly, the elements of Euclid should not dominate the course to the exclusion of properly arranged and graded proportions, introducing modern pure geometry. Thirdly, more attention should be paid to practical geometry, both as an introduction to deductive geometry, and as a means of increasing the confidence of the beginner in the accuracy of logical deduction. Finally, the arrangement of the course should correspond to the psychological development of the pupil in giving, first, a collection of facts learned from observation or measurement; secondly, a knowledge of the principles of deductive reasoning obtained from the formal Greek text; thirdly, a broad and homogeneous idea of the elementary plane geometry as far as might be given in the time at the disposal of the student.

HIGHER ELEMENTARY PHASE OF SECONDARY EDUCATION IN ENGLAND.

By W. Pakenham, B. A., Toronto.

The British Royal Commission on Secondary Education of 1894 finds the basis of classification of secondary schools in social distinctions. "The various types of schools needed and the types of instruction they ought to give are broadly determined by the length of time during which the various sets of scholars may be expected to remain at school." The first of these types or grades includes those ancient Public or Grammar Schools whose "special function is the formation of a learned or literary, and a professional or cultured class." The courses of these schools are completed generally at eighteen or nineteen years of age and conduct the students to the universities. The second grade, with courses complete generally at sixteen or seventeen years of age, includes the Technical, Scientific or High Schools," whose special function, although it does not at all exclude an ideal of culture, is the education of men with a view to some scientific form of commercial or industral life. The third grade —and here we come upon the Modern Higher Elementary Schools— trains boys and girls of the humbler social stratum, between twelve and fifteen years of age, "for the higher handicrafts or the commerce of the shop and town." Of this third grade, as the most recent in origin, the most democratic, the most necessary, and in no distant future the most universal of the Secondary Schools, I beg leave to speak here.

The French Revolution presented the modern world with systems of popular instruction. England was the last of the great European powers to accept the gift; as late as 1870 her acceptance was half-hearted and inadequate. Between 1870 and 1900, however, the growing power of the new democracy made of education a national interest. Increasing wealth, the burdens of the world's commerce, expanding civic demands, were reflected in educational progress. The first ten years provided school buildings and teachers and above all, familiarized the people with the school rates. During the next twenty years the leaving age was steadily advanced from ten to eleven years, then to twelve, and at last to thirteen years. The average school life too, was prolonged from 2.55 years in 1870

to 5.19 years in 1880, and to 7.05 years in 1897. Meanwhile the elementary curriculum was enlarged and enriched. Subjects that had been luxuries became necessaries. Reading expanded into Grammar, Composition and Literature; Arithmetic into Mensuration, Book-keeping and Commercial forms. Drawing was added with needle work and object lessons. To the sixth 'standard' or year was attached a seventh, to the seventh an ex-standard class, and beyond this an advanced division which trained in Grammar, French Mathematics and Physical Science. In the steady expansion of these twenty years we have the evolution of the Higher Elementary School —the Secondary School of the Third Grade.

The Higher Elementary School, as evolved out of the Elementary school, is not peculiar to England. Expansion and enrichment of the elementary curricula during the last quarter of the nineteenth century is universal. Moreover, the evolution of the Higher Elementary School is natural–the direct issue of modern social and industrial conditions—and to that extent inevitable. It rounds off and completes the elementary system, crowning it, in England at least, with a symmetry and totality of effect that is characteristic of slowly-evolved English institutions. As the natural expansion of the elementary school, it exemplifies the best traditions of that school—its democratic spirit, its careful methods, its trained teachers, utility, co-education, economy.

While the appearance of the Higher Elementary school in the sphere of Secondary Education in England was not due to specific legislative enactments, for some years at least, the government in an indirect way fostered its development. It advanced the graduation limit in elementary schools, as we have seen, and increased the number of the standards. It encouraged with state loans buildings intended partly for higher elementary purposes. In 1882 it urged Wales to organize its higher elementary schools, even at the risk of greatly increased rates. In 1889 it empowered a committee of County or Borough Councils or other municipal bodies as the newly-created supervisors of technical instruction to levy a rate of one penny to assist schools or classes in technical subjects, and so defined technical subjects as to include the secondary or higher elementary courses. In 1890 it added to the revenues of these committees surplus customs and excise duties to the amount of $4,000,000, to be known hereafter as the 'whiskey money.' Meanwhile the Central department of Science and Art at South Kensington elaborated an

examination and grant system for classes in such science and art courses as Manual Training, Domestic Economy, Sciencean,d Commercial subjects. Out of this system, and in accordance with the regulations of the Science and Art Department, many advanced primary schools assumed the form of a special class in general science, a science-top, to wit, to be known technically as an "Organized School of Science."

The existence of the Higher Elementary School as such was at first unnoticed or disregarded. Its growth was so slow as not excite the jealousy of the regular secondary schools. The burden of its maintenance– it lived on grants already mentioned and on the fees of the pupils—was unfelt by the rate-payers. A change came with the "free-education" Bill of 1891. Free elementary education meant increased attendance and prolonged school life. This involved larger expenditures and a more generous application of the local rates. At once the problem of the Higher Elementary school was forced into the field of national interests. Educatlonal problems are proverbially difficult of solution in England.

The special problem presented by the Higher Elementary Schools was complicated in two ways. There was the natural disinclination of the English mind to seek in legislation a relief from burdensome social conditions. The law must lag behind the need of the law. With schools as with other social institutions let time, custom and the sturdy good sense of the nation evolve an organization to which later years may give a legal status. Thus it was that the Government, recognizing the difficulties presented by the problem of the Higher Elementary Schools had hitherto postponed all efforts at its solution. It disregarded the application of the Elementary School rates to subjects not in the elementary code (i.e. advanced science, mathematics, modern languages), and in behalf of students well beyond the elementary school age. It disregarded, too, the illegal grants of the Science and Art Department to schools and subjects that were exclusively elementary. At times this negative encouragement became positive. By official letter, and by official speech, school boards were urged to greater efforts in behalf of advanced elementary education. There is evidence even of state loans to buildings known to be be exclusively for advanced elementary classes.

The problem was complicated in a second way by its relation to the vaster problem—the organization of secondary education. This vaster problem was becoming fearfully involved. Secondary educa-

tion in the last decade of the century had replaced primary education as the vital educational interest of the nation. But the nation was regarding the new interest from diverse and disconnected standpoints. The Endowded Schools' Commissioners viewed it from one side, the Committees on Technical Education from another, the Science and Art Department from a third, the Higher Elementary Schools from the fourth, with a consequent dispersion of energy, overlapping and waste of effort and money. The problem presented by the Higher Elementary Schools was not then the problem of the Higher Elementary Schools *per se* but the problem of the co-ordination of the Higher Elementary and all other Secondary Schools. The educationist's first duty was to bring order out of the chaos of Secondary instruction.

Recognizing this duty, the Government appointed in 1894 the great Commission on Secondary Education. The Report of this Commission declared *inter alia* that the elementary course should be expanded, and the advanced subjects—such as Mathematics, Modern Languages, and Science—should be brought within reach of the masses. In order that this Higher Elementary training might be properly co-ordinated with the Secondary system, and in order that unity and economy might rule the sphere of Secondary education, there should be created, first of all, a special local authority, and then a supervising central authority. But while co-ordination and economy should be the watchwords of the new re-organization, there should be no sterilizing uniformity. Given its general constitution, each municipality should work out its own scheme of secondary instruction.

The great Bill of 1896 embodied many of the recommendations of this Report, but diverse national interests and weak party ties, as we have seen, make 'patch-work' legislation out of important legislation. All great Bills in England—it has passed into a proverb—are baffled Bills. The Bill of 1896 was withdrawn, as were the Bills of 1898, 1900, and 1901 to be re-introduced and passed piecemeal later.

In the Bill of 1896, the Government declared what the constitution of the new local authority was not to be. That authority should not be the existing School Boards for elementary schools. The organization of these Boards forbade it. They were overworked, narrow, plebian bodies, representative of but a part of the community and out of sympathy with the larger interests of educa-

tion. To make it more impracticable politically, they were at enmity with the Church and existing Secondary Schools. On the other hand, the government and the ordinary Secondary Schools were as yet unable to unite in declaring what that local authority should be. These schools feared the results of rigid inspection: they loved their own freedom and elasticity, and dreaded the unifying force of a supervising authority. Recognizing the opposition, the government abandoned all effort to create the local authority by statute. Time, it hoped, and the natural course of events, aided by instructions, minutes, and codes, would do, more or less surreptitiously and unconstitutionally, what could not yet be done by legislative enactment. For the present, the Government decided to repress Higher Elementary Education as controlled and defined by the Elementary School Boards. It refused sanctions for the creation of organized Schools of Science. It withdrew State Loans from special Higher Elementary Schools, and the usual grants of the Science and Art Department. By the famous clause seven of the Directory of the Science and Art Department of 1897-8, it even pre-judged the whole question, by providing that "where satisfactory county organizations exist, those may be regarded as the local authority responsible to the Department. As agents of the Department they will distribute State Grants and all new Schools must accept their jurisdiction." The growing opposition to the School Board's appropriation of school rates to higher elementary purposes found expression at last in the refusal of Auditor Cockerton, of the Local Government Board in London, to pass the usual higher elementary accounts—a refusal with which the Government was evidently in sympathy.

The creation in 1900 of a supervising central authority—The Board of Education—did not alter this policy of repression. The great code of 1900 in sweeping away, by its so-called Block-Grants' clause, the last vestige of the "payment by results" principle, dealt another blow to the existing higher elementary system. The transfer of the grant basis from subjects to students injuriously affected the revenue of the advanced classes where pupils were few and subjects many, while the urgent protests of the School Boards extorted from the Government a promise of relief, the relief itself was of such a nature as to increase the seriousness of the blow. The relief-measure of 1900 offered special grants to Higher Elementary Schools under almost prohibitive conditions. The curriculum of each

school—which should be approved by the Board of Education—was to provide for a four years' course. This course while it presupposed a satisfactory literary education, must be largely scientific—the regular theoretical and practical course of the Organized Schools of Science. No student should be admitted to a Higher Elementary School who belonged to other than the humbler industrial classes or who was more than fifteen years of age or who would not pursue the Higher Elementary course consistently to the end.

Both in staff and equipment the school must have the approval of the Board of Education. Separate buildings, with laboratories, laundries, kitchens, art-rooms, science lecture-rooms, manual training shops—these were required and the requirements were rigidly enforced. London asked for recognition of its seventy-nine advanced schools and all were rejected. The first year of the new law's operation saw but two schools sanctioned.

The prohibitive character of this measure is evident. The School Boards asserted that the fifteen year limit was too low for an advanced course of four years. The four years' course itself was too prolonged for boys and girls who would ultimately engage in mechanical and industrial pursuits. The curriculum was too general —the literary and scientific course of the Elementary School expanded and developed with no special reference to commercial or technical branches. Finally, the insistance upon a general literary and scientific training in the Higher Elementary Schools and the consequent postponement of specialization until after the fifteenth year, forced the great body of advanced students into the regular Secondary Schools.

Meanwhile the so-called Cockerton case was appealed and the final decision was disastrous to the claims of the School Boards. Local school rates, it was declared, may not be applied legally to other than the elementary subjects and the high water mark of the elementary course is that defined in the Education Act of 1870 and the Whitehall codes of subsequent years. Moreover the school rates may not be applied legally to the instruction of adults and the adult age would come somewhere between fifteen and seventeen and further Science and Art grants cannot be distributed legally among purely elementary subjects.

With the opening of Parliament in 1901, things educational in England had come to an *impasse*. Higher Elementary schools existed, had earned the right to exist, had grown up under the co-

operation to some extent of State and School Boards, and yet without legal status. Their revenues were gone. They possessed no formal organization. The difficulty could be met, said the Government, in its new Education Bill of May last, and one feels that the Government assisted in developing the difficulty in order that it might be so met by the action of a local authority for secondary education. This local authority should be a committee of the County or Borough Council, or some association in which the Council should hold the balance of power. The Council should devise its own committee or association scheme, the Committee should organise its own Secondary Schools, and distribute its own grants. In particular, the committee should control the creation, organization, and financial administration of the Higher Elementary Schools. But public opinion had not yet ripened. The Bill was too revolutionary, and, pressed by its own supporters, the Government withdrew it. The *impasse* must be removed, however, and the Government came back in July with its Cockerton Minute, brief, and in purpose effective. This Minute gave authority to the County or Borough council or to the Technical Instruction Committee to legalize for one year the expenditure on existing Higher Elementary work. This Minute became law.

Opposition to this law was strenuous. The temporary character of the compromise it was claimed will cripple the energies of school managers. The age limit of legally admitted students —fifteen years—will discourage the erection of new advanced classes. In touching to the quick the pride of deserving School Boards, the Government will destroy many existing Higher Elementary Schools. Against these pleas the Government urged that the forced withdrawal of the original Bill and the lateness of the year rendered a temporary compromise necessary. The age limit of fifteen, moreover, is the limit advised by the law officers of the Crown. Further, the Government affirmed that the number of schools or students that will be adversely affected, is insignificant. "Certainly, not one higher-grade school will be shut up," asserted the Vice-President, Sir John Gorst. "Elementary Science is included in the Whitehall code—and the elementary school rates may be applied legally to that. Advanced Science is taught in 48 Organized Schools of Science, and while school rates may not be applied to such subjects, these schools may on the other hand receive aid from the Science and Art appropriations. In these 48 schools there are but

1000 students over 15 years of age ; in fact in all England there are in the elementary day schools but 3,800 pupils over 15 years of age. These 1,000 students, or at most these 3,800 students, will alone be affected by the new Minute. In the presence of the numberless scholarships of the ordinary secondary schools, and the undoubted excellence of the work of such secondary schools, why lament the forced withdrawal of these boys and girls from the elementary schools ? "

But after all it was not so much à question of the existence of the Higher Elementary School. All parties agreed in general that the school was a social necessity. The masses in the modern English State must be educated to meet the civic and industrial demands of that state. " We have to make sure of our equipment. Mentally and physically, all our people must be made worthy of their high destiny." " We must secure in the individual the indispensable safeguard, one not less needful in the long run than ships or swords—the safeguard of intellectual and moral competence to hold our own in every field with the most progressive nations of the civilized world." The great question was the character of the new local authority. Shall the School Boards control the Higher Elementary Schools or shall the County Councils ?

In behalf of the School Boards, it was argued that they were the natural guardians of Higher Elementary Education. They assisted at its genesis, they understand it, they should complete it. As 95 per cent. of the advanced students are graduates from the elementary schools controlled by the School Boards, the latter are best able to co-ordinate the courses in elementary and advanced work. Moreover, the fees, as well as the social aloofness, of the regular Secondary Schools, make necessary the existence of advanced schools for the masses. Who could maintain them better than those intensely democratic bodies, the School Boards ? It is urged further that in securing a snap verdict in favour of a new and extraneous authority, the Minute revolutionizes in a fundamental principle the provisions of the Foster Act of 1870. County Councils are elected for purposes other than educational. They lack the experience and traditions of the School Boards. They have strong pro-church and aristocratic tendencies, and are subject to unsafe political influences. Can they best maintain the higher education of the masses ?

The opponents of the School Boards do not in general deny the need of Higher Elementary Schools, but they are terrified by visions

of great expansions in higher elementary work at unlimited cost and with a maximum of friction and confusion. They would organize it with an eye to co-ordination, economy and dignity. The School Boards can not so organize it and have shown that they can not so organize it. They represent but two-fifths of the elementary school population of the kingdom, their particular electorates are narrow and they themselves do not understand if they are not actually hostile to the interests of the broad culture of these secondary schools. In fact the proper local authority is founded in the nucleus in the County Council, a large, representative, generous, cultured local authority such as will serve England true in the approaching re-organization of her secondary and technical education.

This, in a general way, is the case for each party. For the moment at least, the balance of votes, if not of argument, has swung in favor of the Municipal Councils. And it has swung in favor of the Municipal Councils with greater emphasis because there are not wanting more or less fair-minded men in England who regret the creation of the Higher Elementary Schools, as schools of the masses and see in the new local authority a means of arresting their growth. These men think that the country's need is not educated hewers of wood and drawers of water, but educated leaders.

The privates in the great industrial armies may be ignorant so long as the captains are trained. "They hold the opinion which is sometimes expressed by great professors of Universities in their speeches that there are functions which have to be performed in the modern life of civilized communities which are best performed by people ignorant and brutish. An indignant ratepayer expresses this in a more selfish form: "Let those who want secondary education pay for it!" from an exclusive member of parliament it comes as: "Why let down a ladder to bring up competitors against us and our children? Are we to pay to get our throats cut?" Even a vice-president of the Committee of the Council of Education may have an opinion: "To give Higher Education to the sons of the laboring classes would be as arbitrary and improper to keep boys at Eton and Harrow at spade labor."

It is interesting—and perhaps profitable— to note the contrasts in certain phazes of secondary education between England and America, and by the way, America here means Canada as well as the United States or, more specifically, Ontario as well as New York. Our imperialistic fellings may resent but cannot deny the fact that

more and more daily education to the south Great Lakes becomes education to the north of the lakes. Canadian politics, social life, church, finance, journalism, education—all these borrow their ideals from across the border and the century that lies before us will but emphasize that truth. But as to these contrasts.

The Royal Commission on Secondary Education defines Secondary Education as "a process of intellectual training and personal discipline conducted with special regard to the profession or trade to be followed," and it found the basis of its classification of secondary schools in social distinctions. Much unlike this is the Report of the American Committee of Ten: "Every subject which is taught at all in a secondary school should be taught in the same way and to the same extent to every pupil so long as he pursues it, no matter what the probable distinction of the pupil may be or at what point his education is to cease." In other words—and contrary to the general impression—the English idea lays stress upon the utilitarian aspects of secondary education while the American ideal would emphasize the importance of general culture. With his old world instincts, the English educationist expects the youth of twelve to select his life's work and to select it in obedience to conditions that leave him little freedom of choice. The American child, on the contrary, is a creature of no irremoveable conditions. His education is "democratic" for it delays as long as possible the division between the child intended for the University and the child intended for workshop." Copying the German and French plans, the English system tends to confine and specialize the student's education at too early an age while the American system errs—if it be an error—in deferring by one or two years the student's admission into Secondary School, or into a College, or finally into professional or mercantile life.

Other contrasts result from this utilitarian spirit. Materialism jostles us by the way. It is present at the hustings, in the press, on 'change, before the altar—everywhere it appears in more or less rampart form. It finds its way into the schools and perverts them from their true uses. To enlarge, strengthen, uplift the souls of men, these are their uses. Judged by the tone of English journals and educationists—to contract, subvert the soul, to aggrandize, extol the self, to carry into things of the mind the methods of the world, its competition, and destruction, its cheaper cotton, better iron, surer artillery, these are to be its uses. The room where the

time-honored culture studies have long held sway now gives place to the laboratory, sewing room, school kitchen, laundry, manual training shop; the culture-subjects themselves "dwindle, peak, and pine" under the pressure of Agriculture, Sociology, Anatomy, Physiology. Whenever the world thrusts forth an expert theorist the school is visited with a new ology or a new laboratory. This is true to some extent in Secondary Education in England. Is it true in Ontario? No, not yet.

Another contrast. To the conservative temper of the Englishman and to his passionate love of personal freedom are due the irregularity and elasticity of his institutions. The ordinary secondary schools in England are products of the social, religious, and intellectual movements of the past; they vary with the forces that created them. The middle or lower-class Englishman—and he had nothing to do with the creation of these schools—loves them in their absence of homogeneity, in their antique cumbrousness, because his forefathers loved them and because it pleases him to love them. Not so with the ordinary American. He created these schools; they are modern and grow out of his elementary schools; they come near to the hearts of the masses; and the masses everywhere, unable to thread their way amid myriads of fortuitous instances—will organize, classify, reduce to rule and measure, with no overlapping, dispersion, or extravagance. American secondary schools, therefore, are uniform in character and equipment. The 130 High Schools of Ontario move forward without friction and with singular uniformity, an educational instrument unequalled in its regularity and precision. "At this minute," the Minister of Education might almost say, "at this minute in the High School at A, Mr. B.C. is teaching 35 boys and girls the 5th prop. of the III Book of Euclid, or the Subjunctive mood in Latin, or Tennyson's "Of Old Sat Freedom on the Heights." But uniformity, necessary and inevitable in a young democracy, may become a danger. In recent changes in curricula and examinations in Ontario there is evidence of a decidedly reverse movement towards decentralization and local elasticity. In England, on the contrary, if we are to judge from the recent evolution of both local and central authorities, the movement is from the extreme of local freedom and variety towards uniformity. Happy the people that stand by the golden mean!

In England the ordinary Secondary School leads to the College or University. The College or University comes down to the Second-

ary School and directs its curriculum and methods. Its inability to direct the Higher Elementary School finds expression in a University professor's resentful protest: "That school leads nowhere, it has no end or aim," and in the University's steady hostility to such schools. There grows to-day in Ontario a feeling decidedly the reverse of this. There the High School receives the child from the great world, gives him a good general training and turns him back into the world. It has, or should have, primarily no thought of trades or professions, it should look neither to the left nor right, nor beyond. Its one purpose should be give a well-rounded general training in nothing more pronounced than in its completeness in itself. This, then, the training of the masses, the making of democracy, should be the end or aim of the Secondary Schools of Ontario, and this end or aim is to be attained only in a course of training that has about it both totality and finality. It follows that in Ontario the High School should not primarily lead to the University, and the University should not come down and direct the High School. Nor should it provide the High School with methods, curricula, and ideals. May this feeling grow!

Space will not permit an extended reference to other phases of these contrasts. The most hasty consideration of English legislation on Secondary Education convinces one of the cautious temper of the English people. Law, with them, lags behind even the demands of the nation. Slow and sure in legislation, the old land is an excellent object-lesson to her democratic off-spring, who are too prone, even in matters of education, to fly from extreme to extreme, to act first and reform afterwards. It is interesting to notice, too, that in the presence of great social measures in England political ties are not sacred. In America, social questions are largely political questions and inevitably so, and the reforming educationist for the time being is a practical politician. To this fact is probably due the lack of persistence in American educational movements. But to this fact may also be due the abiding faith of the American in free education, whether it be primary, secondary, or superior, and his abiding faith in the administration of that education by officers primarily and directly representative of the people.

THE PROBLEM OF ENGLISH COMPOSITION IN THE HIGH SCHOOL.

By Miss Janet Carnochan.

A problem it is indeed. While we may not state that it has been solved, we surely may safely say that the problem is nearer solution than it was say twenty years ago. And those who can go back to school days of forty years ago and recall how little was done in that direction can surely look with some slight degree of pleasure on the present days—imperfect as we know the work to be, and with much still to be desired. Can any remember how in the old days, when the announcement was made that a composition was to be written, the blank look that would steal over the faces, and of the sitting with idle pencil, of the equally blank sheets given in, of the whisper to some pupil unusually gifted in this direction? "Tell me what to say or write something for me," or if the essay were written at home, the so distressingly evident copying from books in the family library or something evidently written by parents or friends and boldly or perhaps shamefacedly given in? And who does not remember the stock subjects of those days, Honesty, Justice, Generosity, Temperance? In the time tables of those days, Composition found no place except once or twice a year and then how dreaded. While claiming that it is better taught than formerly, we do not wish to depreciate the work of the teachers of old, or to infer that no good teaching in this subject has been done.

No, far from this. All honor to the pedagogues of the past who did so much for the teachers of the present day.

Now that in the public schools Composition is part of the curriculum, when pupils reach the High School a certain standard should have been reached. Still, this is not uniform. With some the first elements of sentence building must be taken up, while others who have been under more favorable auspices already write well.

We known how during the last twenty years of the High School with its ever changing curriculum,—as the poet said:

> "This way and that way swings
> The flux of mental things."

We may paraphrase. This way and that way has swung the educational curriculum, now Mathematics high in mid air, and English low in the dust, then as some one happily expressed it (it was a

mathematician and ruefully perhaps the phrase was used) "A king arose who knew not Joseph" and English began to take its proper place, but in the mad race of Classics, Science, Moderns, Mathematics, English, in trying to give each subject its due importance it is found difficult indeed to obtain enough time for Composition. But what amount of Mathematical knowledge or Scientific lore, or German can atone for bad English? If we can neither speak nor write correctly our mother tongue, we must receive the brand of interiority no matter what our standing in other subjects.

How then shall we teach Composition? Also how not? Several essentials may be mentioned in this humble attempt. Constant and regular practice, care, generous criticism, subjects selected of which the pupils have some knowledge, they must have something to say and must be helped in knowing how to say it, trained habits of observation, the old story of eyes and no eyes.

Some years ago it was the fate of the writer to hear an address on the subject by a distinguished educationist in which he claimed that he had earned the gratitude of all teachers by discovering a way to save them the interminable and slavish examination of compositions as commonly done by carefully reading all of them. We were told how we might examine two or three essays, take notes of the errors, which would be much the same, place these errors on the blackboard, ask for corrections, return the whole of the papers and the pupils would then be able to correct their own mistakes. The teacher need not read these during the weeks of work *but keep them till the end of the term and then read them.* Fancy in addition to the weekly or monthly or quarterly, as the case might be, written examinations papers to inspect, with the natural loathing felt for this work, an Atlantean load like this to await our leisure. A teacher present, of the Commercial Course quite agreed with the statement that correcting a few errors would be enough, he had taken that subject *one* term, and given as subjects principally the writing of forms such as are used in book-keeping, invitations etc., in which there being a fixed form, uniformity is required, but how apply this to gain the easy, graceful flowing style we wish to cultivate. And who that knows the varied blunders that can be made, the infinite variety, the wonderful ingenuity shewn in going wrong, can believe that by the errors of a few papers can be corrected the multicplicity of mistakes made by the class? And what shall be done with the sentence so

can. It renews her ideals by bringing her into contact with the concrete child. Abstract children will soon be things of the past. Inspiration, knowledge, real growth, and professional enthusiasm are the results. It refreshes and invigorates the teacher, clarifies her mind, corrects the personal equation, and prevents personal resentment. So far as the school is concerned this is the greatest benefit of Child-Study, for after all, every teacher is greater than her method, and the only way in which schools can be improved is to put better men and women behind the teacher's desk.

Child-Study has removed much sin and misery from the school-room in the dealing of teachers with so-called stupid children. It is now known that some children do not hear well or see well; that adenoid vegetations in the vault of the naso-pharynx interfere with proper breathing, causing "mouth breathers," and proper aëration of the middle ear and Eustachian tubes; that abnormally large tonsils may occasion the same trouble. A child so troubled has a characteristic, stupid, vacant appearance due to the fact that he is more or less deaf and has throat or nose obstruction or both. Such a child can usually be recognized by his open mouth, obstructed breathing, thick nasal voice, elongated face and dullness of expression. A peculiarity of the trouble is that the stoppages of the Eustachian tubes do not always occur. Some days these are normally open. On such occasions the pupil is remarkable for his mental brightness as contrasted with his usual dullness. For a few days progress is rapid, until the tubes are again closed by secretions, and again he becomes as dull as formerly. The teacher is apt to accept this as confirmatory evidence of an obstinate, perverse spirit. The remedy lies in a visit to a surgeon who removes the growths and prescribes proper treatment for the ears—a simple operation, by the way. But alas, at times teachers attempt the cure themselves and the child knowing he is being reproved, and perhaps punished, for no fault of which he is conscious, is driven into sullenness, obstinacy and general stupidity.

Child-Study cautions the teacher against improper treatment of all such, especially against nagging them, and shows how easily many such cases can be cured.

Again Child-Study has directed attention to eye defects, and has taught teachers to make a study of such and give the most favorable positions in the room to those afflicted, instead of trusting to mere chance or assigning them the darker and more distant places, whilst

Let the essays then be written out in ink at home in blank books for the purpose and again read carefully by the teacher, errors marked and at the option of the teacher again re-written.

But this you say entails a great deal of work on both teacher and pupil, but what great good was ever accomplished without hard work? It is by untiring effort that we gain "eminent domain" Week by week an essay thus written twice, half an hour for writing the first draught, another for discussion in the class, hints, corrections, then a third half hour at home to write out carefully. If these essays be kept, at the end of the year, there will be found an interesting collection, the first crude attempts, the gradual improvement, the writer's personality being increasingly shewn, then come flights of fancy, original thoughts, skill in using illustrations from the history or literature lesson, opposite quotations; all the powers of the mind here find room for development.

Third.—Encouragement may and must be given, one scholar shows originality, another has great powers in describing natural scenery, the work of another is neat and correct, another brings up happy illustrations or appropriate quotations, still another shews that rarest of all qualities in a scholar's essay, genuine humor, all may be praised without being invidious, the beginner may be encouraged by telling of what others have done from lame first attempts. The writer has much enjoyed reading the essays of pupils on some poem, the discussion of which in the literature lesson had been enjoyed by all, or a poetical description of scenery known to all, shewing acute powers of observation and beautiful thoughts and has said "I could not have done it so well" has had the pleasure of seeing pupils advancing step by step in literary skill and now delighting others with this gift.

But there must be the culture which reading gives, and training in the power of expression and above all high thoughts. I have not touched on the minutiæ of orthography, syntax, paragraphing, etc. The thought is the principal thing. A great man has said "Reading makes a full man, speaking a ready man, and writing an exact man." Many of us have thought we understood some subject thoroughly till we came to teach it, or write out what we knew of it, and then have found to our dismay how little we actually knew of the subject. If scholars are asked to write on the board regularly, to state some fact in History, Literature or Science, much skill is gained in expression and this tells in the Composition hour. It is

control of the large muscles and acquire a knowledge of the form and proportion of the letters. This will be a pedagogically sound preparation for writing on paper. Thus the nervous over-strain resulting from producing fine work of any kind will be avoided. However, we are so bound by tradition, and parents now know as much, if not more, about how children should be taught and managed, or at least they think they do, than those who have given years of close study to educational problems, that I fear a reform in this respect will be difficult. More especially will this be so, as many teachers are ignorant of the existence of such a law. These will require to be trained to forget how they were taught. This will need time, but I am convinced that at ten there would be a race of free, easy, elegant writers in place of the small, cramped, nervous ones at present.

The same law requires that in Manual Training the hammer and the saw should precede the knife.

In sewing in the primary rooms, the cloth should be coarse, needles should be large, and stitches long.

In the Kindergarten this law requires that too great precision, involving delicate and complex co-ordinations in pricking, sewing, and folding should give place to occupations and games involving large muscles and wide movements. I am glad to say that in this department of school work, the Kindergartners have already recognised the existence of this law, and have, in consequence, altered much of the work in connection with the occupations. There may be yet room for further improvement.

This law in conjunction with that of interest, requires that drawing by children should be a means of expressing thought and not a matter of imitation. Children show great interest and much aptitude when they are allowed to draw as a means of expression, when their lines are curved, when they are expressing some memory image. The natural child never makes straight lines. He begins where most drawings end, with the human figure. Teachers of drawing recognise these foundation facts, and have already altered their methods and work accordingly.

Child-Study has shown that the strongest potential capacity in the child is that for action. Hence, if we would do our full duty to our pupils, we must minister to their activities. In this connection we have not yet fully realized our possibilities. We are not yet fully training children to become men and women of action, but are

INSPECTION AND TRAINING.

MINUTES OF THE INSPECTION AND TRAINING SECTION.

WEDNESDAY, AUGUST 14.

A.M.

The session opened at 9.45 a.m. with Dr. J. M. Harper in the chair. Through want of proper notification, Dr. S. B. Sinclair did not act in his capacity as Secretary of this Section.

Wm. Scott, B.A., Principal Normal School, Toronto, read a paper on "What Child Study has done for the Teaching World."

A paper on "Methods in Arithmetic" was read by Inspector W. J. Summerby, who maintained (1) that a disproportionate amount of time is being given to the subject; (2) that the time saved might be then given to Nature Study, Poetry, etc.; (3) that the problems given were cumbersome because of the amount of manual labour involved in their solution. Disscussion on this paper was freely entered into by Miss L. B. Robins, B.A., Wm. Johnston, Principal Merchant, and others.

Mr. S. Silcox gave notice of motion to the effect "That in the opinion of the Inspection and Training Section of the Dominion Educational Association, the time has arrived when the respective provincial Governments should fix a minimum salary for all Public School Teachers, and make provision for assisting weak school sections."

THURSDAY, AUGUST 15.

A.M.

The opening paper of this session was read by Mr. John Parker, B.A., who took for his subject "Duties of the School Inspector outside the Schoolroom."

Mr. J. W. McOuat, B.A., followed with the complementary subject "Duties of the School Inspector inside the Schoolroom." These papers were discussed at length by Dr. Harper, Inspectors Johnson, Knight, and Summerby.

Inspector S. Silcox, of St. Thomas, introduced his motion *re* teachers' salaries, of which notice was given in a previous session.

After some discussion it was moved by Mr. Truell and seconded by Inspector Silcox "That the question involved in the motion of Mr. Silcox be referred to a Committee nominated by the Chair."—Carried.

Dr. Harper then nominated the following Committee :— Principal Scott. Inspector Silcox, and Dr. Harper.

On motion the section proceeded with the election of officers, which resulted as follows :

President—J. M. HARPER, LL.D., Quebec.

Vice-President—WM. SCOTT, B.A., Toronto.

Secretary—D. MCINTYRE, M.A., Winnipeg.

Principal Truell of Lachute, Que., read a paper on "The Teaching of French."

"Attention. How it can be secured in the Schoolroom" was the title of a paper read by Dr. H. S. Bridges, St. John, N.B.

On motion of Inspector Knight, the session then adjourned.

FRIDAY, AUGUST 16.

A.M.

The session was opened by Mr. Sidney Silcox, B.A., who took for the subject of his paper "The Psychology of Nature Study." He maintained that Psychology is a most necessary subject in the education of the teacher. A strong plea was made to show the necessity of Nature Study in the lower forms of elementary schools, and that much of the other school work may be grouped upon the subject.

The report of the Committee appointed *re* a minimum salary for teachers was read by Inspector Silcox. The Committee recommended "That the Legislatures of the various provinces be approached with regard to granting a special bonus to those schools in which competent teachers have been engaged for a continuous period of three years, and that a copy of this report be sent to the various Provincial Associations for discussion and action, and to report to this Association at its meeting in Winnipeg, 1903."

Moved by Inspector Houston, seconded by Inspector Summerby, that the report be adopted and sent on to the Committee on Resolutions.

Inspector Colles not being present, Inspector Wm. Houston addressed the section on "The Grading of Urban Schools." The writer of this paper advocates such a change in the grading of urban schools that would allow a teacher to go on with his class from grade

to grade, thus securing continuity and giving opportunity for a teacher to make a stronger impression.

This paper was fully discussed by Inspector Silcox, Mr. Putman, Dr. Harper, and Inspector McOuat.

Moved by Inspector McOuat, seconded by Mr. Broderick, "Whereas it is the duty of the teachers of the Dominion, here in Convention assembled, to guard the youth of our country against all misrepresentations and false impressions affecting the territory of the Dominion and the validity of its boundary lines, and

"Whereas there is on exhibition a map of North America, issued by an American firm, exhibiting the United States contention regarding the Alaska boundary line, and

"Whereas these maps are finding their way into our own public schools, thereby affecting the pupils and public contrary to the British contention, and prejudicing their minds unfavorably to the position of our Dominion Government.

"Be it resolved that we hereby express our disapproval of the practice of using American maps in preference to British maps, and that we also call the attention of all concerned to be on their guard against purchasing such maps as do not leave British territory inviolable."

P.M.

Inspector R. H. Cowley opened the session by reading his paper entitled "The Defects of our Common Schools."

A discussion followed, in which Dr. Sinclair, Inspectors Knight, Summerby, and Houston took part.

Moved by Inspector Summerby, seconded by Inspector Knight, "That those papers on the programme that have not been read be taken as read and printed in the minutes."

Moved by R. H. Cowley, Esq., seconded by Dr. Sinclair, "That this section approves of the principles of consolidation of schools, and that we recommeud to the various local governments such modifications of the school laws as will render the application of consolidation practicable."

The meeting then adjourned.

WHAT CHILD STUDY HAS DONE FOR THE TEACHING WORLD.

By Wm. Scott, B.A., Principal Normal School, Toronto.

At times progress is so gradual, changes are so imperceptible, new applications of old principles push themselves forward so quietly as not to attract much attention. It is only by contrast with what obtained a number of years before that the extent of the changes and the decided advancement which has been made in recent years are realized.

In education we are at present passing through such a stage of imperceptible progress. Yet when we contrast what is now regarded as educationally sound in theory and practice with what was so accounted twenty or twenty-five years ago, the progress made is marvellous, especially so in our educational practice, whether in teaching or discipline, To show the connection between this era of progress and Child-Study in the purpose of this paper.

The Child-Study movement began in America in 1879, with the publication of the measurement of the height and weight of several thousand school children of Boston, and was followed in 1880 by a little work known as the *Content of Children's Minds* by Dr. Stanley Hall. Since then much earnest attention together with much that is foolish and useless has been devoted to Child-Study. However, the wise investigators have so dominated the foolish ones that this subject has so fully demonstrated its right to be recognized as an educational force that I will not say a word about its uses and how it should be pursued, except incidentally, but will try to point out what it has done and is doing for education and educational principles and practice.

Before passing on, however, it is well to remember that truth is always in the middle; it is never found at either extremity. So while the old cry was "know the subject you are to teach" and the new one is "know the being you are to educate," both kinds of knowledge are necessary, for of what use is it to know the child, if when he is known, the teacher has not the requisite acquaintance with the world of nature and school subjects to enable her to apply the proper stimulus to cause him to put forth his best efforts. It is like building a palatial edifice on a sand bank. Failure so far as real education is concerned is inevitable. Hence let it never be forgotten that Child-Study can never teach a school. A person may be

able to prate with apparent learnedness of "inwardized ethical ideals" and "psychologic co-ordinates," but unless he has a living, quickening acquaintance with the solid things of Science and Literature, Grammar and Art, History and Geography, he will, of necessity, be only a keeper of school and the veriest of charlatans.

In the educational world, perhaps, there is not much that is absolutely new. Perhaps, vague references and at times explicit statements may be found in our Platos and Aristotles, in our Lockes and Comeniuses, our Pestalozzis and Froebels for all our educational principles, but such references, such knowledge, can not be said to produce much effect when it did not result in action. Now Child-Study has put the motor element into our educational means and devices. Not only do we know but our knowledge has passed in many cases into action. Thus the old has become new, at least in that it has become a power. It no longer rests in a dim, hazy, stifling miasma, but has become a quick, inspiring breeze, wafting the educational craft onward.

Child-Study has quickened within the teacher a more tender conscience, a more exalted ambition and a keener sense of her powers, limitations, opportunities and responsibilities and has inspired her with a hallowed reverence for the little lives entrusted to her care.

Thus Child-Study has freshened and heightened our interest in children. The child is now understood as never before. The child like every other growing thing must be placed in congenial surroundings. Child-Study has supplied these. Teachers are now much more earnest and sympathetic than formerly. There is much less perfunctory work now than ever before. This is true of those who study their children and of those who do not, for the former have compelled the latter to adopt a more rational form of school methods and school management.

The interest thus awakened is not confined to teachers only, but school authorities, legislators, and even the masses of the people all find themselves impelled to take more interest in education. What is the meaning of Mothers' Clubs, Mothers' Congresses, Mothers' Reading Circles, Art Leagues, but increased interest in children. Dr. Stanley Hall says that the movement has increased matrimony and the desire to rear children.

But whatever secondary benefits may accrue, the primary one is for the teacher. It keeps her young and optimistic as nothing else

can. It renews her ideals by bringing her into contact with the concrete child. Abstract children will soon be things of the past. Inspiration, knowledge, real growth, and professional enthusiasm are the results. It refreshes and invigorates the teacher, clarifies her mind, corrects the personal equation, and prevents personal resentment. So far as the school is concerned this is the greatest benefit of Child-Study, for after all, every teacher is greater than her method, and the only way in which schools can be improved is to put better men and women behind the teacher's desk.

Child-Study has removed much sin and misery from the school-room in the dealing of teachers with so-called stupid children. It is now known that some children do not hear well or see well; that adenoid vegetations in the vault of the naso-pharynx interfere with proper breathing, causing "mouth breathers," and proper aëration of the middle ear and Eustachian tubes; that abnormally large tonsils may occasion the same trouble. A child so troubled has a characteristic, stupid, vacant appearance due to the fact that he is more or less deaf and has throat or nose obstruction or both. Such a child can usually be recognized by his open mouth, obstructed breathing, thick nasal voice, elongated face and dullness of expression. A peculiarity of the trouble is that the stoppages of the Eustachian tubes do not always occur. Some days these are normally open. On such occasions the pupil is remarkable for his mental brightness as contrasted with his usual dullness. For a few days progress is rapid, until the tubes are again closed by secretions, and again he becomes as dull as formerly. The teacher is apt to accept this as confirmatory evidence of an obstinate, perverse spirit. The remedy lies in a visit to a surgeon who removes the growths and prescribes proper treatment for the ears—a simple operation, by the way. But alas, at times teachers attempt the cure themselves and the child knowing he is being reproved, and perhaps punished, for no fault of which he is conscious, is driven into sullenness, obstinacy and general stupidity.

Child-Study cautions the teacher against improper treatment of all such, especially against nagging them, and shows how easily many such cases can be cured.

Again Child-Study has directed attention to eye defects, and has taught teachers to make a study of such and give the most favorable positions in the room to those afflicted, instead of trusting to mere chance or assigning them the darker and more distant places, whilst

those of normal vision occupy more favored sittings. Here also while much can be done in school for such, the parents should be informed so that proper medical treatment may be given to the children.

Again Child-Study shows that the troublesome restlessness of a child is often the sign of the approach of some nervous disease as Hysteria, St. Vitus' Dance, or Epilepsy. The efforts of the child to control himself only aggravates the evil. Many in days gone by, well meaning persons too, found that they had entirely misjudged such children and punished them when they were wholly undeserving of it. Child-Study tends to cause all who have to do with the young to ask themselves the reason for any abnormal conduct and hence saves many from future unavailing regrets.

Child-Study has demonstrated beyond controversy that there is no development without the functioning of the nervous system. Hence, the laws which express the development and activity of the nervous mechanism must largely determine pedagogical principles. Now, one of these laws of prime importance in Kindergarten and primary school is that the fundamental is developed before the accessory. Hence, all motor training should lead from the fundamental to the accessory. There should first be a strong, healthy development of the fundamental nervous processes, then should follow more delicate, more complex acquisitions. The fine writing, the small straight-lined drawing, the intricate work and complex operations of the Kindergarten, the use of the figures in carving in Manual Training are all contrary to the law written in childrens' nerve centres. The sooner we begin a reform, the better it will be for the healthy development of the race.

Is not this the reason that children like writing when permitted to write large or to scribble, but become cramped, nervous, and irritable when confined to small, accurate writing between ruled lines? At present as soon as a child enters school we begin to have him make accurate letters between parallel lines. This is unnatural and hence wrong. Do we do this in almost any other kind of work? When the baby begins to walk, who insists upon his taking accurate steps. Children like to make large marks with a sweep of the arm. As we manage it, the hand is small, cramped, and nervous. Bad writing is against our present system. Child-Study points to the fact that any writing a child may do up to eight, should be on the blackboard with the arm movement. During this period he will get

control of the large muscles and acquire a knowledge of the form and proportion of the letters. This will be a pedagogically sound preparation for writing on paper. Thus the nervous over-strain resulting from producing fine work of any kind will be avoided. However, we are so bound by tradition, and parents now know as much, if not more, about how children should be taught and managed, or at least they think they do, than those who have given years of close study to educational problems, that I fear a reform in this respect will be difficult. More especially will this be so, as many teachers are ignorant of the existence of such a law. These will require to be trained to forget how they were taught. This will need time, but I am convinced that at ten there would be a race of free, easy, elegant writers in place of the small, cramped, nervous ones at present.

The same law requires that in Manual Training the hammer and the saw should precede the knife.

In sewing in the primary rooms, the cloth should be coarse, needles should be large, and stitches long.

In the Kindergarten this law requires that too great precision, involving delicate and complex co-ordinations in pricking, sewing, and folding should give place to occupations and games involving large muscles and wide movements. I am glad to say that in this department of school work, the Kindergartners have already recognised the existence of this law, and have, in consequence, altered much of the work in connection with the occupations. There may be yet room for further improvement.

This law in conjunction with that of interest, requires that drawing by children should be a means of expressing thought and not a matter of imitation. Children show great interest and much aptitude when they are allowed to draw as a means of expression, when their lines are curved, when they are expressing some memory image. The natural child never makes straight lines. He begins where most drawings end, with the human figure. Teachers of drawing recognise these foundation facts, and have already altered their methods and work accordingly.

Child-Study has shown that the strongest potential capacity in the child is that for action. Hence, if we would do our full duty to our pupils, we must minister to their activities. In this connection we have not yet fully realized our possibilities. We are not yet fully training children to become men and women of action, but are

still paralyzing their love of action by feeding them on words. Observation points to the fact that this capacity for action takes the direction of imitation, and hence every one who comes within the ken of the child becomes his teacher. Hence the necessity of watching the child's environment, for imitative actions affect the motor-nerve cells so as to tend to reproduce themselves unconsciously. The child thus becomes linked to his past in his manners, his speech, his modes of thought, etc. Hence to be fittingly cared for during this imitative period there must be ingrained in every nerve cell a tendency to actions of a right kind. Neither teachers nor parents yet realize the supreme importance of the simple pedagogical law. This explains the necessity of repetition in such subjects as Spelling, Tables, Pronounciation, etc., and just here Psycho-physical experiment shows that in such exercises the now rejected simultaneous method plays an important part in fixing the thing to be remembered. The only precaution to be taken is to see that the answer is necessarily simultaneous, and that the individual is giving attention to the general repetition. This is the simplest way of making the motor memory so perfect that the brain is left to attend to higher things.

In the school-room some teachers fail to supply the necessary stimulus to produce this action by their manner of conducting the recitation. They question and question until the child grows dull and listless and jaded under the bombardment. They are reversing the law of action which in the natural state manifests itself on the child being stimulated, by his formulating questions as well as by his stating his opinions. Any teaching which so deadens the pupil that he fails to respond in kind is pedagogically unsound. When traced to its source, this error lies in a perversion of another educational principle, viz., nothing is to be told the child which he can find out for himself.

Child-Study has shown that each organ has its nascent period; that neglect at any stage of development is always expensive. We have learned enough of the nascent periods of mental processes to cause us to believe that their final discovery will be a great step in the Science of Education, for we shall then know when to teach certain subjects and the method to be pursued in doing this. We know now that the brain acts not as a whole, but that different portions of it have different functions; that we have not a memory but memories, not an imagination but imaginations; that each memory and each imagination as each sense must be trained by

specific means and that there is no one study whose main function is to train the memory or imagination.

Corresponding to the nascent periods of the motor organs are the periods of interest in the child's mental growth. These interests are sacred, for the time of interest is the time of opportunity. Here opportunity seldom comes twice, for after one impulse has been displaced by another, interest dies out and it requires great skill to reawaken this impulse, and it has been clearly shown that it can never be aroused to the same intensity. Hence, "strike while the iron is hot." Failure to do so results in irreparable damage to that activity. On the other hand it is just as injurious to unduly magnify or force a given impulse. Again, the studies of the interests of children reveal great inherent differences as seen in their plays, their stories, their likes and dislikes, in fact in all their spontaneous efforts. As yet we fail to recognize this difference in our courses of study and in our teaching.

Again, while the observing, questioning, and reading which teachers now do because of the study of children's interests, have added, each day, new life to the teacher and the school; and while this has individualized the mass and the class has ceased to be a herd; and while it is seen as the Irishman said of women that children are "all alike in being different," yet we are far from having solved the problem of how to treat the children of a class of fifty as distinct individuals so as not to retard the progress of those anxious to go on, nor goad on those not ready to advance. This problem is now before the educational world clearly, owing to the recognition of the rights of individuals due to Child-Study. How this problem is to be solved is for the educators of the present as yet a riddle. Yet the fact that it is recognized as a great and serious educational problem is a mark of great advancement. How great or how far we have advanced can scarcely be realized even by one who remembers that Comenuis gravely maintained that it is not only possible for one teacher to instruct several hundred children at once, but that it is essential for the best interests of both the teacher and the children that he should do so.

Child-Study has demonstrated its value in school by pointing out useful lessons regarding Fatigue—which is merely reduced nerve force. Thus it is now known that mental fatigue is sooner induced where work is distasteful by the heavy strain upon the will necessary to keep the pupil at his work. The struggle between inclination and

duty is taxing, hence exhaustation sooner follows; also that the body wearies quicker when the mind is tired and the mind more quickly when the body is tired; that the conditions of the atmosphere, the weather, the time of the day all affect the power of endurance; that the child that has grown quickly, tires easily; that fatigue causes the mind to be less sensitive to interest or novelty and so there is difficulty in fixing and holding attention—that when the organs are unhealthy or if the pupil is under-fed, weariness, irritation and difficulties of discipline supervene; and that the irritability due to fatigue is caused by the pressure of an acid in the blood formed there by severe activity of any kind and is best relieved by a fresh supply of Oxygen and a change of work.

Experiments show that with the average pupil mental fatigue from school work which is quickly induced as quickly passes away. Hence, to secure the best results with the greatest economy of time and effort, pupils should work well and frequent periods of rest should be provided. One at the close of every forty-five or fifty minutes of study at least. Every teacher should know from her own experience—and what is true of the adult is equally true of the child—that one favorable hour is more valuable than two or more unfavorable ones; that after a time effort ceases to be fruitful and becomes positively injurious when carried beyond the limit of temporary fatigue.

Child-Study has shown the importance of play—free, spontaneous play—in reducing school-room fatigue to a minimum.

Spontaneous activity rapidly dispels mental fatigue and yet there is nothing so helpfully educative as the self-activity induced by play. Physical training exercises do not afford as good opportunities for mental recuperation as the more spontaneous play-exercises. The former require close attention and the same exercise of will power which is the chief factor in school-room fatigue. It is now proven that such exercises instead of inducing recuperation rather heighten fatigue, so that the child returns from the gymnasium with impaired energies, whereas, the exhilaration of out-door play is the best tonic for rapid recovery from mental fatigue.

It is now known that times of physical growth are also times of mental growth in acquisition, though children then are not able to systematize well. They are now capable of much rapid progress, but it is of an indefinite, somewhat confused nature. Let them make the acquisition. The clearing up process will come a little later.

Hence in time of great and rapid acquisition ease up the constraint of methods. Show pupils how and why, but do not require them at this time to reason closely or to explain all that they say or do.

From recent investigations, the conclusion is inevitable that the period which is most favorable for physical growth—nine to thirteen in girls and eleven to fifteen in boys is also most favorable to mental growth. The old notion that rapidly growing children, if normal, should be removed from school, has been thoroughly disproved. Such children should be furnished sufficient pabulum to keep them fully occupied.

In our practice in Ontario, I fear we do not yet realise the importance of these facts, but arrest the development of the child by our efforts to make every step thorough and definite before attempting the next. Irreparable injury is often done under the talismanic name of thoroughness. Dr. Harris has clearly shown that the habit of teaching with too much thoroughness and too long-continued drill such subjects as Arithmetic, Spelling, the discrimination of colors, observation of surface and solid forms, often leaves the pupil fixed by the law of habit in lower stages of growth and unable to exercise the higher functions of thought.

Child-Study has shown the crucial importance of the period of adolescence. It has shown that at this period, youths are vulnerable to all kinds of temptation, and that the older generation must at this time give the younger its most consummate care ; that this is the time when the soul grows fastest and most ; that now new sympathies are awakened and reverberate the widest ; that now is the time when youth is most susceptible of culture and development.

Genuine sympathy is necessary to a boy or girl at this time. The teacher whom the boding tremblers fear, murders the budding life of the pupil whom she is paid to assist into full manhood or womanhood. As already shown, this is not the time to acquire skill, but it is the time to develop the fundamental in all departments. Skill, definiteness, and accuracy come later.

Child-Study has shown us what can be taught to children. The teachers of a few years ago went ahead, presented knowledge, and had it memorized. We now recognise as never before that this was no knowledge to the child. What we successfully teach at any stage of a child's development must be appreciated by the pupil, hence as Child-Study helps us to appreciate what a child knows, how he knows, and why he knows, it must help us to decide what ought to

be taught to him. This subject has shown that children are impressed to a very small extent by the visible aspect of things ; their chief interest being in what an object is good for and what it can do. Hence to interest primary children you must start with the uses of objects and gradually lead out from what things can do to their structure and properties.

This is at variance with our school books and school practice. The sooner we recognise this phase of child nature, the better it will be for education, and especially for the happiness of the children.

Child-Study has taught us that some children are eye-minded, some ear-minded, some motor-minded, and all must be approached through the lines of least resistance. This has not yet been recognized fully in our methods. We are still content to present a subject in a certain way thinking that what is good for one must necessarily be good for another. Is not this another cause for falling behind which is so annoying to teacher and pupil? *e. g.*, Any attempt to teach word recognition, or spelling, to all in the same way must if it succeeds with some, fail with others. This again brings home with force, the necessity of a study of individuals in the class.

Child-Study has demonstrated that children soon forget the abstract moral essay which they read or the lecture to which they listened, essays and talks on such subjects as unselfishness, truthfulness, bravery and the like, but that they remember stories embodying the same moral ideas and like these stories because of the presence of these ideas. Hence, we must pass over the moral essay or talk and teach stories.

It has shown that all efforts to teach morality by mere word of mouth are vain ; that unless there are certain types of action there can be no morality; that unless the child interprets the lesson on morality whether oral, or read, or in story, in terms of its own actions, it might as well not be given. Child-Study has, forever, given the quietus to those who think that what is in the intellect must necessarily be in the heart and find expression for itself in the conduct. This is a pedagogical idea of the past which dies hard ; but, thanks to Child Study, only a faint echo is now heard of the fallacy that to make good men and women, all that is needed is to bring them up on the Catechism and Scriptures. It has completely changed our ideas of teaching morality. Formerly this was negative.—Don't do this or

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rk of independent thought.

The fact of the matter is that here, in Ontario, we are overwhelmed with a flood of arithmetical problems. I have no reference to the text-books ; book after book of problems is thrust into the schoolroom until the thing is becoming a plague. Our school journals, too, instead of giving us discussions on Education, treat us to page after page of arithmetical solutions.

Arithmetic can be so taught that by the time the pupil is ready to enter the third book he will be quick and accurate in the four

simple rules, and be able to apply them to the solution of simple problems with easy numbers. The pupil, guided by the teacher, would construct all his own tables at his seat and commit them to memory. His work with the teacher would be chiefly oral; and, unhampered by mechanical work, he would do some real thinking, instead of slavish copying. With the natural development of his powers of attention he would be able to proceed to more intricate combinations, and to work with larger numbers with ease. And this could be done with the time now given to the subject reduced by at least one-third.

This is not a matter of theory merely. Several of our teachers have made the experiment and the results are satisfactory.

The time saved can be given to the learning of Poetry, to Composition, to Nature Study, etc.

Perhaps we could thus find time for attention to the ethical side of education—something that we are too apt to neglect.

THE EDUCATIONAL REQUIREMENTS OF TO-DAY.

By William Johnston. M.A., LL.D., Athens, Ont.

The one great fact of to-day is the rise of the New Democracy. Wherever the flag of England floats, or the American banner is unfurled, the New Democracy takes rank as a social and political force of the first magnitude. But its influence is not confined to England and America alone. In France, in Germany, in Russia, in Italy its power is also felt; and the outlook at the present time is, that in these countries, as well as in England and America, it will be productive of much good, especially to the masses, if this democratic freedom does not terminate in anarchy, which is always more fruitful of misery than the worst tyranny.

It is believed that the New Democracy has come to stay, unlike the democracies of ancient and mediæval times, it is intelligent and virtuous. Having obtained possession of the reins of state, it has

sufficient intelligence to drive the regal carriage safely along the devious windings which intersect the possessions of the Desmas. The ancient democracy failed because it was ignorant; the new Democracy, if it succeeds, will succeed in consequence of its superior intelligence, and it is the duty of the education of to-day to afford this superior intelligence to the masses, as well as to the classes.

A practical knowledge of Reading, Writing and Arithmetic is is not sufficent education. The first requirement of education is to give the means of acquiring knowledge independently; and this certainly involves a knowledge of these subjects, but after the moral side of education is of more importance than a mere extension of book knowledge. Indeed, to such an extent is this the case, that intellectual training without moral development is frequently similar in results to putting a deadily weapon into the hands of a maniac. A sword in the hands of a patriot may be useful in the defence of home and country, but in the hands of a madman it might be useful only as an instrument of aimless destruction.

It is claimed that the New Democracy is greatly superior to the old in point of morality, and that this superior morality will carry it safely over the shoals and rocks on which were wrecked the ancient republics which clustered around Athens and Rome.

Lecky, in his *History of European Morals* finds a principal cause of the downfall of Ancient Greece and Rome in the looseness and unpopularity of the marriage relationship. Francis Galton, in *Hereditary Genuis* expresses the same opinions; while Hadley's *Roman Law* drives us irresistably to similar conclusions. The argument is the same everywhere. A state is an extended family; a family cannot exist without the marriage relationship, hence, when marriage becomes unfashionable the state is menaced through the destruction of family ties, interests and conjugal affections.

The family is now sacred and inviolable. It is said that *Mother*, *Home* and *Heaven* are the sweetest words in the English language; and as long as that feeling endures national degeneracy is impossible. The distinctive characteristics of the New Democracy, then, are it is intelligent, it is moral, its family relationships are deep-seated and enduring. Hence, a primal requirement of the education of to-day is to cultivate the good seed sown among the masses, so that it may bear abundantly fruit

which will make the intelligent more intelligent, the virtuous more virtuous, and the happy home a still more happy home. History and Philosophy, Science, aud Mathematics, have been the delight for ages of the master minds of earth, but they fade into insignificance when brought into comparison with an education which is capable of raising human beings out of degradation and misery, and of giving them the means and the will to live honestly and happily with a reasonable portion of the necessaries and luxuries of life at their disposal.

Closely related to the New Democracy is the labor movement. In union there is strength, and therefore, united labor must be productive of good. But when united labor "goes out on strike" it may be productive of loss to the laborer as well as to the employer. A man has a natural, and also an acquired right, to refuse to work; but he has neither a natural nor an acquired right to prevent others from doing work he has refused to do. This element of coercion, which is gencrally present in a "strike," is so utterly opposed to natural justice that it cannot act otherwise than injuriously upon the labourer. The "Montreal Star" is my authority for the statement that the national loss to Great Britain, due to strikes in 1897, was $75,000,000.

The education of today should attempt to solve the labor problem. If it can be proved that strikes cost the laborer more than he gains by them, then they should be abandoned, and other methods substituted instead of them. It is the duty of our education to give the laborer trustworthy information on important social and political questions so that he may enter upon life-work with well-defined lines of action placed before him. If this were done, social and political reformation might be speedily accomplished, and at a comparatively small cost. Under the existing methods any improvement in the laborer's condition is obtained at enormous cost on the labor side, and at a corresponding loss on the side of the capitalist. It is frequently said that what is one man's loss is another man's gain. But here we have a case in which one man's loss is another man's loss. The true statement is that one man's gain is another man's gain; and the education of to-day should so imprint this maxim upon the national mind, that every employer would give a fair day's wage for a fair day's work, freely and voluntarily, because he believed it to be to his interest, as well as the laborer's, to do so.

There may be great difficulties connected with teaching socia and political principles in our Public and High Schools, but its importance is so great that mere difficulties should not be allowed to prevent such teaching. If instruction in this subject is confined to the College and the University, very few of our young men and women will receive any information whatever relating to it. What we want is practical education. The pupil should learn in school what he must practise in his life work. All through life he has to struggle with social and political problems : his school life should teach him how to solve such problems. His school life does little for him if the time is spent in acquiring knowledge which is of no service to him in after life in that case he has virtually to begin his education after he leaves school; and without assistance educate himself. If he fails to do this he passes throngh life groping in the dark and grovelling in the dirt ; an object of pity or contempt as whim may direct the mind of his superior ; but never a being commanding admiration or respect.

The increased power and influence of woman is the life blood of the New Democracy. There never was a period in the world's history in which woman exercised the influence which she exerts today. The primal cause of this is the teaching of Christianity. In non-Christian countries, such as Turkey and China, the degradation of woman is as complete at the present time as it was in the days of the Patriarchs. The education we are proud to call our own is now recognizing the fact that the mind of woman is in no way inferior to that of man. Our universities have many female students ; and the class lists prove conclusively their ability to master the various branches of higher education without more expenditure of mental energy than is required from the ablest male students. It may be that in Turkey "Woman has never a soul to save." but in all Christian countries she is the equal of man. And yet, socially, and to a great extent legally, the professions are not open to women. Why should we not have women doctors, clergy, and lawyers? Nay, more, would it not be beneficial to the state if we had women legislators? If John Fiske's *Destiny of Man* is ever to find a realization on this earth the medium through which it must come is Woman. The W.C.T.U. must go on conquering and to conquer ; The Christian Endeavor Society must continue to battle against the powers of evil; the Y.W.C.A. must have the fostering care of Woman ; and the youth of every land must know that righteousness exalteth a

nation, but sin is a reproach to any people." This is the kind of education that the twentieth century requires. Is it the kind of education the twentieth century will receive? This question the teacher of the day must answer. If he says "Yes," and does his best to prove the truth of his statement, the historian of the future will write something like this: "At the beginning of the twentieth century a revival of learning burst forth which surpassed in purity of morals, in spiritual earnestness, and in intellectual vigor the glorious Renaissance of the 16th century." All that is required is for everyone to do his best. We have the knowledge and the experience of the past at our command. The implements of labor are ready to be put into our hands. We have nothing to do but to work. We know where to begin and how to proceed. In our towns and cities evil habits are generally fixed before the boy is fourteen years of age and after that the work of reformation is long and uncertain. The ideal education gives correct habits in childhood which is the time when precept and example are most beneficial. The influence of woman at this period is greater than that of man; and therefore, any advancement in the educational status of a country is in direct ratio to the interest taken by woman in the education of the people.

The increased interest taken in education everywhere proves that the public mind is in favor of a well-informed laboring community. It is universally believed that an educated laborer is a better workman than an ignorant laborer; an educated mechanic is a better mechanic than an illiterate one; a well-informed farmer is a much better farmer than one who works mechanically.

Turning to the moral side of life, we scarcely need observe that an educated citizen is a better citizen than an ignorant citizen. In a word, it is believed that education prevents crime. Statistics prove that the majority of criminals have almost no education; many of them can neither read nor write. Hence, as a matter of state economy, (if for no higher motive) it pays to educate the people. It is better to build schools than reformatories; it is better to erect colleges than prisons. This is the language of experience, and not of mere sentiment or Christian philanthropy. The education of to-day should utilize the desire for knowledge which is now so active everywhere. It should direct aright the activities of the youthful mind. It should sow the good seed in the soul before the evil nature plants vice and crime. It should give the child something *useful to do;* and it should keep him doing *something useful*, until it becomes a

habit as deep seated and as lasting as life itself. Man is the only being that can extend the thumb at right angles to the palm of the hand; and, yet few men can make anything with their hands. They can make a *speech* or a *row* as occasion may require; but they cannot make *ends meet* if left to their own resources. If I have hurt anyone, pardon me.

Nevertheless a distinctive characteristic of the education of to-day is that it is becoming more practical. Manual Training schools are something new. It is now recognized that the hand requires training as well as the brain Ultimately human existence on earth depends upon the labor of the hand, and this fact is sufficient, in itself, to show that Experimental Farms and Manual Training schools form a very important part of the educational requirements of to-day. Many a young man is better fitted by nature to earn his own living as a farmer or a mechanic than as a doctor or a lawyer. That young man should not enter a profession. Instead of attempting medicine or law he should study mechanics in a Training school or farming at an Experimental Farm. This kind of practical education is of great value and therefore, it should receive a generous support from the state, in addition to the hearty co-operation of an interested public.

Political economy, as well as common sense, tells us that the strength of the state is measured by the working power of its people. We need, in America especially, more farmers and mechanics. We have professional men in abundance. Every teacher, every citizen interested in the welfare of his country should attempt to turn the youth of this fair land in the direction of the farm or the workshop so that there may be built up a nation of thrifty and vigorous men and women, and be implanted in them a love of industry and of country, to give them high ideals and noble aspirations, and above all to teach by precept and example, that the noblest work which can engage the attention of man is to earn an honest living for himself and those depending upon him. This is an educational requirement of to-day.

Returning to the moral side of education, I submit that it should receive more attention. Intellectual development has become almost the only education. Morally and spiritually we are suffering from retrogression. Crime is still rampant. Pessimists tell us the world is not growing better. Suicides and murders are of daily occurence. Dishonest practices, punishable at law, are so numerous that only a

that. Now it is positive—Do this or that. Formerly it was external repression.—Now it is self-expression.

Child-Study is causing us to realize that school is made for the child—not the child for the school.

We have not realized the thought yet. The idea is, however, floating about, and sooner or later will crystalize itself in action. A good many fine systems and uniform ways of doing things will then receive their quietus. Is not this already bearing fruit? Already there is a revolt all along the line against uniform promotion examinations. These and other school hinderances will disappear just as soon as school authorities recognize that the school is for the pupil and not for the teacher or trustees.

METHODS IN ARITHMETIC.

By W. J. Summerby, Esq.

The heading as originally written, had a sub-title, which, like the humorist's postscript to the lady's letter, contained the pith of the matter. It was in the form of a question : " Is too much time devoted to the subject? "

All agree that Arithmetic is one of the most important of all the school subjects, that it must have a prominent place in the course of study ; but the question is : Are we not giving it too great a prominence ?

For the past year or two I have been giving some special attention to the matter, and find that, in the majority of our schools, the teaching of Arithmetic takes up the time from the opening of school until the morning recess at 10.30 or 10.45. Besides this, at least half of the time spent on home work is given to Arithmetic. It is no unusual thing to find four or five long exercises in multiplication or division given as home work to a second class, and a like number of difficult problems to the third and fourth classes. About thirty per cent. of the pupils' time is thus given to this one subject. Is not this out of all proportion to its relative importance among the subjects of study ?

What are the reasons for the great amount of time given to the subject? Various ; chiefly, I think, custom, coming down from the time when the subjects of study were confined to the three R's. Examinations determine to a great extent the methods of teaching and the length of time given to any particular subject. In our Ontario examinations, Arithmetic has always held a very prominent place. Comparatively little work has been given to test the pupils' accuracy and speed in the simple rules, a little theory ; the greatest stress being laid upon the solution of numerous and difficult problems. Of late, I am glad to say, an improvement is noticeable in this respect. No doubt the principle of ease has something to do with the matter. It is so easy to go to the blackboard and write down a long row of figures, to dictate a difficult problem from a book of exercises ; and the teacher can examine the pupils' work in a comparatively short time.

Notwithstanding all the time given to Arithmetic, business men make complaint that our boys make slovenly figures, and cannot add quickly and accurately. Accuracy and speed in calculation, the ground work of all good work in Arithmetic, are neglected, and time wasted in solving a mass of difficult problems for which the child is not prepared.

It may be said that the fact that the child solves the problems is proof that the problems are not too difficult. But the question is not : Can the child be led to solve the problem ? but rather : Is the time profitably spent in taking up this particular work at this stage ? Would there not be a great saving of time in taking it up at a later stage, when the child's mind is more mature ? Would not some of the time now wasted on these problems be better spent on other subjects ? In reality, in the majority of cases, the pupil does not solve the problem. The teacher solves it, and gives the pupil another one like it. The pupils' work is too often merely mechanical, without a spark of independent thought.

The fact of the matter is that here, in Ontario, we are overwhelmed with a flood of arithmetical problems. I have no reference to the text-books ; book after book of problems is thrust into the schoolroom until the thing is becoming a plague. Our school journals, too, instead of giving us discussions on Education, treat us to page after page of arithmetical solutions.

Arithmetic can be so taught that by the time the pupil is ready to enter the third book he will be quick and accurate in the four

simple rules, and be able to apply them to the solution of simple problems with easy numbers. The pupil, guided by the teacher, would construct all his own tables at his seat and commit them to memory. His work with the teacher would be chiefly oral; and, unhampered by mechanical work, he would do some real thinking, instead of slavish copying. With the natural development of his powers of attention he would be able to proceed to more intricate combinations, and to work with larger numbers with ease. And this could be done with the time now given to the subject reduced by at least one-third.

This is not a matter of theory merely. Several of our teachers have made the experiment and the results are satisfactory.

The time saved can be given to the learning of Poetry, to Composition, to Nature Study, etc.

Perhaps we could thus find time for attention to the ethical side of education—something that we are too apt to neglect.

THE EDUCATIONAL REQUIREMENTS OF TO-DAY.

By WILLIAM JOHNSTON. M.A., LL.D., Athens, Ont.

The one great fact of to-day is the rise of the New Democracy. Wherever the flag of England floats, or the American banner is unfurled, the New Democracy takes rank as a social and political force of the first magnitude. But its influence is not confined to England and America alone. In France, in Germany, in Russia, in Italy its power is also felt; and the outlook at the present time is, that in these countries, as well as in England and America, it will be productive of much good, especially to the masses, if this democratic freedom does not terminate in anarchy, which is always more fruitful of misery than the worst tyranny.

It is believed that the New Democracy has come to stay, unlike the democracies of ancient and mediæval times, it is intelligent and virtuous. Having obtained possession of the reins of state, it has

sufficient intelligence to drive the regal carriage safely along the devious windings which intersect the possessions of the Desmas. The ancient democracy failed because it was ignorant; the new Democracy, if it succeeds, will succeed in consequence of its superior intelligence, and it is the duty of the education of to-day to afford this superior intelligence to the masses, as well as to the classes.

A practical knowledge of Reading, Writing and Arithmetic is is not sufficent education. The first requirement of education is to give the means of acquiring knowledge independently; and this certainly involves a knowledge of these subjects, but after the moral side of education is of more importance than a mere extension of book knowledge. Indeed, to such an extent is this the case, that intellectual training without moral development is frequently similar in results to putting a deadily weapon into the hands of a maniac. A sword in the hands of a patriot may be useful in the defence of home and country, but in the hands of a madman it might be useful only as an instrument of aimless destruction.

It is claimed that the New Democracy is greatly superior to the old in point of morality, and that this superior morality will carry it safely over the shoals and rocks on which were wrecked the ancient republics which clustered around Athens and Rome.

Lecky, in his *History of European Morals* finds a principal cause of the downfall of Ancient Greece and Rome in the looseness and unpopularity of the marriage relationship. Francis Galton, in *Hereditary Genuis* expresses the same opinions; while Hadley's *Roman Law* drives us irresistably to similar conclusions. The argument is the same everywhere. A state is an extended family; a family cannot exist without the marriage relationship, hence, when marriage becomes unfashionable the state is menaced through the destruction of family ties, interests and conjugal affections.

The family is now sacred and inviolable. It is said that *Mother*, *Home* and *Heaven* are the sweetest words in the English language; and as long as that feeling endures national degeneracy is impossible. The distinctive characteristics of the New Democracy, then, are it is intelligent, it is moral, its family relationships are deep-seated and enduring. Hence, a primal requirement of the education of to-day is to cultivate the good seed sown among the masses, so that it may bear abundantly fruit

which will make the intelligent more intelligent, the virtuous more virtuous, and the happy home a still more happy home. History and Philosophy, Science, aud Mathematics, have been the delight for ages of the master minds of earth, but they fade into insignificance when brought into comparison with an education which is capable of raising human beings out of degradation and misery, and of giving them the means and the will to live honestly and happily with a reasonable portion of the necessaries and luxuries of life at their disposal.

Closely related to the New Democracy is the labor movement. In union there is strength, and therefore, united labor must be productive of good. But when united labor "goes out on strike" it may be productive of loss to the laborer as well as to the employer. A man has a natural, and also an acquired right, to refuse to work; but he has neither a natural nor an acquired right to prevent others from doing work he has refused to do. This element of coercion, which is gencrally present in a "strike," is so utterly opposed to natural justice that it cannot act otherwise than injuriously upon the labourer. The "Montreal Star" is my authority for the statement that the national loss to Great Britain, due to strikes in 1897, was $75,000,000.

The education of today should attempt to solve the labor problem. If it can be proved that strikes cost the laborer more than he gains by them, then they should be abandoned, and other methods substituted instead of them. It is the duty of our education to give the laborer trustworthy information on important social and political questions so that he may enter upon life-work with well-defined lines of action placed before him. If this were done, social and political reformation might be speedily accomplished, and at a comparatively small cost. Under the existing methods any improvement in the laborer's condition is obtained at enormous cost on the labor side, and at a corresponding loss on the side of the capitalist. It is frequently said that what is one man's loss is another man's gain. But here we have a case in which one man's loss is another man's loss. The true statement is that one man's gain is another man's gain; and the education of to-day should so imprint this maxim upon the national mind, that every employer would give a fair day's wage for a fair day's work, freely and voluntarily, because he believed it to be to his interest, as well as the laborer's, to do so.

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nation, but sin is a reproach to any people." This is the kind of education that the twentieth century requires. Is it the kind of education the twentieth century will receive? This question the teacher of the day must answer. If he says "Yes," and does his best to prove the truth of his statement, the historian of the future will write something like this: "At the beginning of the twentieth century a revival of learning burst forth which surpassed in purity of morals, in spiritual earnestness, and in intellectual vigor the glorious Renaissance of the 16th century." All that is required is for everyone to do his best. We have the knowledge and the experience of the past at our command. The implements of labor are ready to be put into our hands. We have nothing to do but to work. We know where to begin and how to proceed. In our towns and cities evil habits are generally fixed before the boy is fourteen years of age and after that the work of reformation is long and uncertain. The ideal education gives correct habits in childhood which is the time when precept and example are most beneficial. The influence of woman at this period is greater than that of man; and therefore, any advancement in the educational status of a country is in direct ratio to the interest taken by woman in the education of the people.

The increased interest taken in education everywhere proves that the public mind is in favor of a well-informed laboring community. It is universally believed that an educated laborer is a better workman than an ignorant laborer; an educated mechanic is a better mechanic than an illiterate one; a well-informed farmer is a much better farmer than one who works mechanically.

Turning to the moral side of life, we scarcely need observe that an educated citizen is a better citizen than an ignorant citizen. In a word, it is believed that education prevents crime. Statistics prove that the majority of criminals have almost no education; many of them can neither read nor write. Hence, as a matter of state economy, (if for no higher motive) it pays to educate the people. It is better to build schools than reformatories; it is better to erect colleges than prisons. This is the language of experience, and not of mere sentiment or Christian philanthropy. The education of to-day should utilize the desire for knowledge which is now so active everywhere. It should direct aright the activities of the youthful mind. It should sow the good seed in the soul before the evil nature plants vice and crime. It should give the child something *useful to do;* and it should keep him doing *something useful*, until it becomes a

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Nevertheless a distinctive characteristic of the education of to-day is that it is becoming more practical. Manual Training schools are something new. It is now recognized that the hand requires training as well as the brain Ultimately human existence on earth depends upon the labor of the hand, and this fact is sufficient, in itself, to show that Experimental Farms and Manual Training schools form a very important part of the educational requirements of to-day. Many a young man is better fitted by nature to earn his own living as a farmer or a mechanic than as a doctor or a lawyer. That young man should not enter a profession. Instead of attempting medicine or law he should study mechanics in a Training school or farming at an Experimental Farm. This kind of practical education is of great value and therefore, it should receive a generous support from the state, in addition to the hearty co-operation of an interested public.

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passing notice is taken of them. The education required to-day is a kind which will give no false views of life, but such as will cause us to live virtuous lives, and to do work which will ultimately teach men to live in accordance with the laws of our being, and to accept the great truth that moral excellence is the Supreme Good.

Perhaps I am here placing the teacher in the pupit. After the teacher has done all he can there will still be work left for the clergyman. Begin moral training early. It is so easy to turn a child in the right direction. We should never fail to do good work, when the effect is the greatest, which is in childhood and youth. Many a hardened criminal has shed bitter tears when the days of his innocent boyhood were brought vividly before his recollection. The first wayward step, the first wrongful act, might have been prevented or corrected if moral training had not failed to do its duty.

Public morality, political integrity and international amity should engage the attention of the twentieth century education. How often it is said, that all politics are corrupt, that a politician cannot succeed if he is an honest one, that only second and third rate men enter politics, because a first-rate man is too noble in mind and purpose to stain his hands or his soul with such filthy work. I fear there is truth in such statements. We all know that history repeats itself, and that like causes will produce similar effects. Now, the history of man teaches this (if it teaches anything,) that if public morality ceases to direct the people, national disaster must necessarily follow. These are truths which should form an important part of the stock in trade of the education of to-day.

Social, political and international relations are now subjects of every-day discussion. The whole world is already akin. Telegraphic cables and electric wires encircle the globe. We are in hourly communication with every civilized nation. We read in the morning newspaper what the people of Europe are doing this morning, and what the people of the Far West were doing yesterday evening. Trade and commerce makes us all neighbors; and why should we not all be friends? International peace conferences should render "the fierce arbitrament of war" unnecessary; although as yet, they have failed to a certain extent in their purpose. But, this is doubtless only a temporary failure. War is becoming more terrible, and hence, more unpopular as a means of adjusting international difficulties. "Peace on earth and good will to men" should be taught in every school. The education of the future should render

war impossible. The solemn words of Herbert Spencer which rang around the world a few months ago, will go down to posterity as the voice of a great man, standing on the line which divides time from eternity, and uttering with his last breath a farewell word of kindness to suffering humanity, "Whatever makes for peace advances civilization; whatever makes for war is a return to barbarism."

We all believe it better to be civilized than barbarous; then, it is better to be peaceable than warlike. Dryden, wrote joyfully of the time "When wild in woods the noble savage ran." But the world to-day knows that the savage was, is, and ever will be, a being without nobility, a shivering starving wretch, pursued by foes visible and invisible, imaginary demons of the air plotting his destruction, and demons of flesh and blood like himself accomplishing it. And, war tends inevitably to return man to this degrading condition. Surely the prayer of every friend of humanity is "Let us have no more war." This feeling should permeate every school and college of our land, and it should be regarded as a new land mark on the educational horizon of the twentieht century.

The influence of the teacher upon his pupil is great. It is surpassed by that of the parent alone. Frequently his ability to give the pupil moral training is superior to that of the parent. Sometimes his power over the pupil is greater than that of the parent. In every case, the teacher has many opportunities of giving moral instruction. Hence, the advantage to the state of having teachers of high moral worth. The teaching profession should command the services of the best men and women of the country. The most brilliant minds should be engaged in the educational field. This is another requirement of the education of to-day.

The perfect teacher is doctor, lawyer and clergyman, unified into one complete whole. The education of this country will do much to make the ideal teacher real. We have many proofs of material advancement in the teaching power. In our department of knowledge—science—the information given the student to-day is very much superior to that given a few years ago. Man's power over the forces of nature has increased so enormously during the nineteenth century that there seems little left to be done in the twentieth.

There may be little left to be done in the physical world, but there is yet abundance of labor in the mental. The educators of to-day must impress upon parents the great responsibility resting upon them in regard to the education of their children. It is to be regret-

ted that many parents do not value the educational advantages they enjoy as highly as they should. To such an extent is this the case that compulsory education laws are in force in several countries, notably, in England, Canada, and the Uniied States. It is believed, however, that such laws fail to do much gcod and that the attendance of pupils at school must depend, to a great extent, upon the skill, earnestness and energy of the teacher. A "winning way" is a necessary part of the teacher's outfit, and this should be, and is, a characteristic of the teacher of to-day. The teacher should go into the highways and byways and compel them to come in; but *love* not *fear* must be the compelling force, and this is a distinctive characteristic of American education.

The state should provide "ways and means" for the education of the people. This is now universally recognized to be one of the most important functions of civil government. The education of the future will be marked by liberal state support. Colleges and Universities will be, in a great measure, supported by the state; and, hence tuition will be free. The education given in these institutions will meet the growing wants of the people; that is, it will keep pace with the onward march of science and art. The state will endeavor to send from the college or the university young men and women fully equipped to go to work and earn their living; in some cases, doubtless by writing poetry or fiction; but, normally, by tilling the soil by mechanical labor, or by mercantile enterprise.

The power of the Church of Christ will be felt in the education of the future: for it is a living force in the education of to-day. It will supply the spiritual element of education, without which there is no true education. It will move the masses to a higher level of living by its eloquence, and inculcate purity of life on earth by the hope of eternal reward in heaven. It will teach altruism by being altruistic; by calling upon all people to live as He lived who "went about doing good."

Such, to my mind, are some of the educational requirements of to-day. Briefly stated, they are:

(1) The New Democracy requires a directing and controlling power supplied by education.

(2) The in creased power and influence of Woman should be a great educational force.

(3) The increased interest taken in education demands attention and assistance.

(4) Education should be mademore practical in order to meet the growing wants of a progressive society.

(5) The moral side of education requires increased attention.

(6) Public morality, political integrity, and international amity should be taught in every school.

(7) The teacher should realise that he is a powerful force for good or evil, and that there is no neutral ground here.

(8) The parent should be made to feel that a greater sponsibility rests upon him in regard to the education of his child.

(9) The State should provide adequate support for the education of all its subjects.

(10) The Church should provide for the spiritual side of education.

(11) Education should be recognized as physical, intellectual, moral, and spiritual development.

(12) The ultimate object of education is the production of a perfect man. "On earth there is nothing great but man; in man there is nothing great but Mind." This is the last word of philosophy; and the constant theme of poetry and history. But mind is great only in its possibilities, and evolution teaches us that the perfect mind is possible, while the education of to-day indicates its ultimate aecomplishment. It may take ages to evolve it, but its evolution is certain, if the "survival of the fittest" is a scientific truth.

THE THIRD ELEMENT OF EDUCATION.

By Dr. J. M. Harper, Quebec.

The fear of coming upon something new is a force as determinative in the ethics of humanity as it is in the conduct of the lower animals. As I have said more than once, the age in which a right thing has readier acceptance than a wrong thing has either not yet reached us or has gone by. And when I stand in presence of the antipathetic prejudices that ever assail the new, even when discerned, in the good and true, and wonder what the fate of my present enterprise may be, I feel something like the home-sick miner who is fain to turn back, but for the prospective value of his find. And though decidedly unwilling to adopt the methods of those who would advocate a vain thing to a seeming success for the sake of personal gain, I am not going to keep back from making known to those to whom it may concern, what has yet to be done by the Public School in the way of rounding out the full being of the child. As the editor of the *Dominion Presbyterian* has lately said: "Educating and strengthening the body and the mind only, and letting the soul remain passive, is to dwarf and degrade the manliest element of man." And in these words the spirit of my present advocacy is tritely exposed. "The burdens which are laid upon the public school" as another editor says, "are manifold and increasing, and the greatest watchfulness is being demanded of our educational guardians to exclude from the curriculum what is not in keeping with the true function of the school, and to favor what is in a legitimate line with the upbringing of the child. Every now and again a crusade is entered upon against the faddist, when there comes an awakening to the fact that the school is made for the pupil and not the pupil for the school. On one point educationists have been agreed, in theory at least, from time immemorial, namely, that provision ought to be made in every system of education for the physical, mental, and moral development of the child. So frequently has this been formulated that the truism when uttered has come to be sometimes sneered at as the veriest educational cant. And yet the truth of the phrase comes periodically with a startling emphasis upon a community, as if it were something new, whenever the word goes round that our schools are imperfect in some of the very phases of school work they were organized to undertake. In New York

and the larger cities of America, the building of new school-houses never ceases, and in the new buildings the contrast is striking from the old, when one observes the arrangements for the physical education of the child, and the carrying out of the laws of health in the class-room exercises. The advancement which is being made every day in the methods adopted for the mental training of the pupil is also none the less striking and meritorious, even if it be stated that there is a plethora of subjects on the school programme. Indeed, in connection with the physical and mental health of the pupil, our educationists have found no halting place as yet, and even the school house in the remotest country district is feeling the influence of these ameliorations to-day." And in no way could I have had a better introduction to what I have to say on the "Third Element in Education," than the words of these editors.

The simplest of all the principles of pedagogy, and perhaps the nearest to the fundamental, is that which is best represented in the following form, if you will only allow a little latitude in the use of terms which are perhaps not altogether scientific:

The Organisms:—Body, mind, and soul.

Their Functions:—(1.) Locomotion, digestion, and what may be called "the doing of the chores." (2.) Thinking. (3.) The guiding and controlling of the conduct.

Their Foods:— (1.) Carbonaceous, nitrogenous, etc. (2.) Knowledge. (3.) Righteousness, or the emotional accentuation of the right.

Their Correctives:—(1.) From the physician. (2.) From the instructor. (3.) From the great All-Father.

Their Sympathies:—(1.) From the nurse. (2.) From the true teacher or trainer. (3.) From the greatest of all teachers,—the Prophet of the Christian morality.

That there is a good working pedagogy in the above may not be as evident to you as it is to me, especially to the younger of us who, from past experiences, dread being mystified with what I once heard a Normal School graduate call "the adumbrations of the ultra-metaphysical." And here, right on the threshold of my subject, it is surely not impertinent for me to say, that just as the young teacher is inclined to turn away from the mystifications of professionalism to the downright practical of the school-room, so I, too often, find children turn away from admonitory instruction or remonstrance, whenever the name of God or our Saviour is mentioned. And this

brings me directly to my subject, which I may now follow with the aid of the Charts before us.

When addressing an audience in New York lately, I met a kindly assailant who assured me that it was hardly possible for one hailing from Canada to understand the educational conditions and necessities of a large city like the commercial capital of the greatest nation on earth. And when he told me what a big contract I had undertaken, in endeavoring to introduce direct moral training into the Public School, and how impossible I was sure to find my task, I merely threw at him the first principle of all school management in concrete form, by telling him that if there happened to be anything in the school he had charge of, that was in any way injurious to the physical, mental, or moral development of the pupils, he was assuming a bigger contract in retaining it, than I had assumed in advocating an improved moral drill in the class-room; and if there was any element necessary for the completing of the education of his pupils not in his school, he, by not having it introduced, was assuming a responsibility heavier to carry than the biggest of contracts.

"But there is the system, with its numerous regulations," he said, "and we cannot over-ride them.'

"Does the school system of the city of New York inhibit moral training in the class-room?" I asked.

"By no means," he answered, "And we do have moral training in our classes, though only incidental."

"Do you teach grammar only incidentally?"

"Well no."

"Or geography, or history, or spelling, or any other of the mind-developing subjects? Or have you your physical exercises only once in a while?"

"What I mean by our having moral instruction incidentally," he said, "is that we do not have regular Bible teaching in our schools."

"Does the Board of Education inhibit the use of the Bible in school altogether?"

"Well no; we may read the Bible every day if we like; but we must do so without note or comment."

"Then, my good man, there is not so much of a contract for me to assume after all," I answered, "for all that I provide for in the carrying out of my plan is the reading of the Bible in an intelligent way by the pupils, and without note or comment on the part of the

teacher. And furthermore I feel convinced that those who adopt my method of moral training or character-building will have to break no law or school regulation that exists in any Christian community in the world."

And in this incident we have perhaps the fundamental objections that may be raised to the project of having a direct and practical and regular process of moral culture or character-building going on in school, collateral with the mental training and physical drill. No school system has ever been framed purposely to the neglect of soul-culture in the child. The neglect has arisen from a use-and-wont, that, in the interest of what it calls public peace, has misinterpreted the school law and regulations. Among the schools of Great Britain and Canada, and I may almost say of every State in the great republic south of us, there is nothing in the school law and its regulations which inhibits moral training, or the reading of the Bible. But school authorities, including many of our teachers, by a misreading of the law, have come to neglect the soul as an entity in the child's being, leaving its development, as my New York friend had to confess, to the incidental. In the system of direct moral training which I am anxious to see introduced into all our schools, there is first, then, no over-riding of the terms of any school law in existence, and far less of the school laws that have been codified for the communities in which the English language is spoken. Of that everyone listening to me may be assured. Indeed we may take for granted that in every school in the land, at the present moment, there is to be found a moral training, incidental as much of it is; and if there is such a training, it is pertinent to ask on what principles it is founded, and what are its effects.

Two weeks ago I heard a sermon in which some such a truth as this was formulated: The doing of church work, when there is no vacancy for us as deacons, or elders, or wardens, or in the mission field at home or abroad, may be accomplished by conforming our own lives in such a way that those coming into our presence may find it easier to be good than to be bad. And in the aphorism there is surely a mint of righteousness for every young teacher, ay, for all of us. But is it stable enough, as a first principle, to erect on it a system of school ethics or any definite plan of moral culture? Is there anything of a finality about it? Have we not to go beyond the personality of man to find a solider foundation for the mannering of mankind? "What is your 'doxy is not my 'doxy!" was the

retort made by a distinguished Canadian divine in my hearing, when some one impugned his orthodoxy in public; and the witticism was surely a lesson to all of us that the final appeal must be, in this matter of ethics, not to the institutions of man's begetting, but to the "eternal verities" in which all morality has its basis. And what are these "eternal verities," if they are not to be found in the ten fundamental principles of conduct which God is said to have inscribed with his own finger, the only thing in Scripture which is said to have had such a direct *imprimatur* from the Most High. Is there one here who thinks that, from the social inclinations of a progressive world, these can be superseded? Has the moral law become effete? Is there any item of conduct that cannot be referred, even in these so-called advanced times, to some one of these ten eternal verities, as a breach or as a right element of conduct? Is the law of God still written on the hearts of men? Would you believe it, if I were to tell you that thousands of children are being turned out into the world, as so-called men and women, who have never had these precepts presented to them as active moral principles. Will the teachers of the land, with the help of my New York friend, make an inspection of their incidental methods of character-building, and say how many of their pupils can quote with exactitude these precepts which are said to be of God's own writing, and which rightly stand as the eternal foundation of all ethical verity? They are certainly not unable to repeat them, because some Gentile of an un-Christian faith has objected to their learning them. Confucius knew them and every Chinaman continues to be taught them to the present day. Buddhism is no stranger to them, and they are down in the Talmud and the Koran as the most pertinent of conduct guidances. Nor is there a Christian sect that does not give them a first place in their catechism. In a word, in them we find the *doxy* which is all men's *doxy*. And surely in them we can find a safe and eternal basis for any system of school ethics we may desire to establish. Indeed on these Charts which I have prepared for use in our schools, you will find them emphasized as the fundamentals of the system of school ethics I would have in all our schools and in the home as well.

And now for a moment, may we not look at what the incidental teaching of morality is doing by way of explaining these ten eternal verities of morality. You say, no doubt, the pupils in your charge know them *verbatim et literatim*. Granted. But do they understand the living active element of conduct in each of them? Would you

think it possible that any one of these pupils, who, you maintain, can repeat every commandment with precise exactitude, has the impression that it is easy enough to keep them? How many of your pupils do you think, have ever thought, that every item of their conduct can be referred to the keeping or breaking of some one of these?

I went into school after school, not so many years ago either, and the schools were not all in, what my New York friend would possibly call, the benighted province of Quebec, and this was the result of my investigations: No child had ever worshipped more than one God; they had never made a graven image to worship it as such; no, they were not given to blaspheming in God's name; they had always kept the Sabbath day by attending Sabbath ordinances; they had never dishonoured their father or mother; they had never killed any one; they had never committed adultery since they did not know what that meant; well, if they had broken the eighth commandment in a trifling way, they were not certainly thieves, and would just like to hear any one call them such in presence of their parents; no, they had never been in a witness box in their lives and how could they have borne false witness against their neighbour; and, as for coveting their neighbour's house or his wife, it was simply ridiculous to ask them if they had broken the tenth commandment in that way. And was it any wonder that I should stand awestruck in presence of the effects of the incidental method of teaching morals,—in presence of a youthful pharisaism that had kept all the commandments. And if you think I have overdrawn the picture, all I advise you to do is to try the experiment for yourself. The school law and its regulations will not prevent you from doing so, as I am sure the school law or its regulations will not stand in your way or in mine, should we provide a remedy.

In a word, these eternal precepts certainly mean more than they seem to mean, and it is for us to seek out some way of getting the full width of their meaning into the understandings of those whom we would train in terms of their meaning,

But how are we to do this? If you are a Presbyterian you would perhaps listen to my explanations and possibly accept them. But how would you act if you should happen to be an Anglican, a Methodist, a Baptist, or even a good Roman Catholic? Would you not turn away from my explanations, in case there might be lurking in them some heterodoxy or other? Indeed, the danger of making

things worse rather than better would make us both hesitate. What then, is to be done?

You have your Pestalozzi and your Froebel, your Bain and your Herbert Spencer, to appeal to in this matter of a "natural method." But who was the author of the natural method of imparting instruction? Who was it that first taught the children of men, after the principles of child nature? Who was it that said "Suffer little children to come unto me, for of such is the kingdom of God," of such is the school of practical ethics for all time? Who was it that said "I come not to destroy the law but to fulfil it"—to fill out its meaning so that a child may understand? What say you to Him as our teacher of what the ten eternal verities, written by God's own finger, may mean as conduct principles? Do you turn away from the true ethical method, simply because God's name and our Saviour's name are associated with it, and say that I am only preaching? There are no "adumbrations of the ultra metaphysical" about Christ's method of imparting instruction. His doctrine, or way of explanation of the eternal verities, is clearness itself; and why should we not accept Him as our teacher, seeing that He is the founder of our religion as well, the religion which has for its function the maintaining and preserving of the highest morality?

The logic of such a selection is irrefragible, and no school law, framed with the intention of giving our children the best physical drill, the most thorough mental training, and the *highest moral training*, can stand its way.

I have therefore, as you may see for yourself, arranged the ten commandments, as they are explained by our own Prophet. There is no word of mine about the explanation. Indeed, there is very little of a scheme of mine about this arrangement. The Christian morality is a unit. It is a fufilment, a development of ethics for all men, Jew and Gentile, bond and free. In co-ordinating the Ten Commandments, the precepts of the Sermon on the Mount, the Lord's Prayer, and the Beatitudes, I have merely provided for the child an easy ascent from the lower to the higher, from the less intense to the more intense meaning given to each commandment as a "verity," and anyone can see at a glance what the training is in its earliest stages, until the full force of the commandment is established, through the memory, as an instinct in the child's being, with a *conduct-corrective* and a *sympathy* attached. And here I must pause to look at an objection which has been, somewhat unthinkingly,

advanced against employing the memory to create an acquired intuition in the soul.

From Ontario I lately had the following letter from one whose name ought to be a guarantee, perhaps, for a keener insight into things psychological, if not pedagogical: "The first impression," he says, "made on my mind is, more memory work for the children, merely this and nothing more. An attempt is now being made to make boys farmers by memorizing facts pertaining to agriculture, to make children grow up temperate and sober by committing to memory facts of physiology and the effects of stimulants. Dr. Harper is trying to make children grow up moral men and women through memorizing the contents of a Chart."

A lecture I once heard when a boy, I still remember as a pleasant experience. The lecturer, who was a rare humourist, undertook to represent successive races of men, with such suggestive physical deficiencies, that the audience was kept in fits of laughter for the hour and a half during which the lecture lasted. A human race with but one arm, or one leg, or one eye, each had its turn in bringing grist to the humorist's mill, with its fun producing effects. I do not recollect whether he ventured on the metaphysical line of observation, and endeavoured to picture a race of men and women without imaginations, or apperceptions, or memories; but, since receiving the above letter, I have thought of the possibilities there are for a second lecturer to make his mark as a humorist, by representing a race of men and women whose memories have been saved from the "toil and trouble" of the school routine. I wonder if my friend objects to the science and art of arithmetic, because the multiplication table has to be commited to memory, or to the art of composition because the rules of grammar are a tax upon the memory. I am sure my fellow-teachers will be relieved to know that in the proposed system of character-building there is no more memorizing to be done by the child than what is contained in the multiplication table, not even so much as is required in learning the rules of syntax in grammar; and anyone who has had the opportunity of reading the rules for the use of the Charts may see this at once if there is no prejudice or mental deficiency in the way of his doing so.

When the connecting links in the moral precepts are established in the child's mind, through his memory and understanding, the moral training begins at once by utilizing the *correctives* and the

sympathies as the curbing of misconduct and the establishing of its correlative virtue. I am not so blinded as to suppose that these directions can be followed with the best effects in every instance. With a teacher in whose presence the pupil finds it easier to be good than bad, the effects cannot fail to be efficient. I have no message for the teacher who expects "to make children grow up moral men and women through memorizing the contents of a Chart." My message is not even to the present generation of men and women, who would deem it cruelty to be called upon to commit to memory the contents of any moral multiplication-table. I do not even suppose that every child inured to the proposed method will become without fail "the best of kin in humankind." But I do maintain that the new method will do more for the coming generation than the incidental. That the power to refer back as by an instinct any item of conduct to the fundamental verity involved through the explanations of our Prophet-teacher; the instinctive cry for help to the great All-Father and soul-physician; and the instant recognition of the sweetening influence of "a well done" in the correlative Beatitude, will make of men and women who have come under the influence of such direct training in school and in the home, stronger to resist temptation and possibly make of their lives an influence in whose presence it will always be easier to be good than bad.

For the benefit of those who may desire to examine the method proposed, I cannot do better than give here in full the instructions as to how the Charts are to be used, attached, as they are, to the Manual for the use of the teacher:

HOW THE CHARTS ARE TO BE USED.

1. The Ten Commandments are to be carefully committed to memory with literal exactitude. The "rigmarole" manner of repeating them ought to be strictly forbidden. These Commandments are God's own words.

2. The explanatory verse, five in number for each Commandment, are then to be committed to memory in the same way. Thereafter a daily memory drill should be given in the locating of these passages as explanatory attachments to the respective Commandments.

3. The "Correctives" or Petitions of the Lord's Prayer should then be attached by a mental exercise to the Commandments, each to each, as the Charts indicate.

4. The "Sympathies" or Beatitudes should then be carefully committed to memory and attached in the same way, each to each, to the Commandments.

5. There should then be a daily drill in connection with the locating of every Scriptural quotation in the Charts as an attachment to the Commandments respectively, until every precept on the Charts has been established as an abiding instinctive relationship in the child's mind.

6. With such a memory-instinct acquired, the soul-exercise may be continued in a systematic way. The best food for the soul is contained in God's Word, and the most healthful soul-exercise is to be found in the searching of the Scriptures for lines of conduct. These lines of conduct are to be found (1.) in the *conduct principles* or precepts; (2.) in the *correctives* or beseechings; and (3.) in the *sympathies* or assurances; and in the reading of a paragraph from the Bible, during the period of the day allotted for devotional exercises; these, when found, should always be referred back, as by an instinct, to the Commandment they respectively elucidate. In this manner the instinct of carrying Scriptural truths back to the original "ten eternal verities" is established, the "rigmarole method" subdued, and a course marked out along which a healthful moral drill may be introduced as an element of school work.

7. In the locating of the good habits or bad habits of soul as infringements of some one or more of the Commandments, the last two columns of the Charts are to be utilized. The suppressing of a bad habit of soul brings the soul into the moral activity that strives after or brings into being its correlative good habit. The teacher has therefore now to train the pupil to refer back as by an instinct, any moral delinquency, specially his own, to "the eternal verity" broken, and to make an instant call for moral support and soul strengthening in the words of the provided *corrective* and its corresponding *sympathy*. In this way, by an instinctive "flashing back" on the part of the pupil, by admonition and illustration on the part of the teacher, (See MANUAL) the virtue of *forgivingness* may take the place of *retaliation; modesty* the place of *lewdness; diligence* the place of *indolence*, &c., and character-building become a tangible practical process in school work.

8. The scope of this "referring back process" is very wide as the practical conscientious teacher cannot but see. By means of the Charts, or the ever active moral instinct they are expected to further,

there comes into play the desire to study an event in history not merely to know the fact but to gain an insight into the moral effects. The reading book, the historioal text-books, the record of all moral delinquincies or excellencies within or without the school-room, and, above all, the daily investigation of Biblical phases of life and truth, with the "referring back process" in operation, provide ample soul activity for the healthful building up of the character or moral well-being of the pupil.

DUTIES OF A SCHOOL INSPECTOR OUTSIDE THE SCHOOL-ROOM.

By JOHN PARKER, B.A., Inspector of Schools, Leeds, Quebec.

A candidate for the position of School Inspector in the Province of Quebec must have attained the age of twenty-five years; he must hold a certificate or diploma for an Academy or Model School; he must have taught school during at least five years and not have discontinued teaching for more than five years,—that is—he must be a practical teacher fresh from the school-room. In addition thereto, he must pass an examination in accordance with the regulations upon this subject adopted by either Committee of the Council of Public Instruction as the case may be. The inspectors of the R. C. Schools for the inspection district of Saguenay and the Magdalen Islands, and the Inspectors of the Protestant schools for the inspection district of Gaspé and the Magdalen Islands may be exempted from the above prescribed formalities.

Before undergoing examination, candidates must forward to the Superintendent of Public Instruction testimonials of good character and conduct according to the prescribed form—also certificates of literary attainments, diploma, etc. Each candidate has to undergo examination upon the following subjects:

(*a*) The methods of teaching the subjects of the authorized Course of Study.

(*b*) The organization, discipline and management of schools.

(*c*) The Duties of Inspectors, School Boards and Teachers, the Operations of the School Law and Regulations of the Province. Fifty per cent of the marks in each of three divisions will be required for passing. All documents are submitted to the committee for consideration, and the candidates found qualified for the position are granted a certificate to this effect, and are, therefore eligible for appointment by the Lieut. Governor in Council at a salary not exceeding $1200.00 per annum. You will see that the terms of this Act precludes incompetent persons from attaining to the responsible position of School Inspector. In fact all our Inspectors are drawn from the ranks of teachers engaged in the actual work of the school-room.

Each Inspector must reside within the limits of his district at the discretion of the Superintendent. In the performance of his duties he shall comply with the instructions of the Supt. of Public Instruction, and conform to the regulations adopted by the Committee of the Council of Public Instruction of the religious belief to which he belongs. He can hold no office under the control of commissioners or trustees of any municipality in his district of inspection. He may be dismissed at any time by the Lieut. Governor in Council at pleasure, or, he may be dismissed upon recommendation from either committee, after an investigation has been held in which he has been convicted of bad conduct, immorality, drunkeness or grave neglect of duty. His commission may then be cancelled, and an Inspector so dismissed cannot afterwards hold such office. No Inspector has ever been dismissed upon any of these charges, and I trust none ever shall. So long as he attends to his duty and does not take an active part in politics, he is in little danger of being dismissed from office at the pleasure of the Lieut. Governor in Council.

School Inspectors were first appointed in what is now the Province of Quebec during the Hincks-Morin Administration in the year 1852. There are 43 public School Inspectors in the Province of Quebec, 33 Roman Catholic, and 10 Protestant inspectors. There is one Inspector for the Protestant Superior Schools; and there are nine Inspectors for the Protestant Elementary Schools, seven of whom are engaged during the entire year with the work in connection with their office, and two, clergymen residing on the Gaspé coast, in addition to their pastoral work, visit and inspect some fifty schools in that district.

There are 5189 elementary schools, 566 model schools, and 156 academies to visit, inspect, and report upon. Of these, there are 878 Protestant elementary schools, 51 model schools, and 30 academies. These schools are under the control of Boards of Commissioners, Trustees, or Directors, in the case of independent schools.

Each Inspector has his territory assigned to him by the Committee of his religious belief. It may comprise one county or eleven. Some Inspectors have but one county, some have two, three, four, six, nine, and one Inspector has eleven counties over which he has to travel in the performance of his official duties. To cover such an area involves considerable hardship, especially during the winter months, with the roads almost impassible at times, and the thermometer at 30° below zero. It is by no means an uncommon occurrence for an Inspector to be compelled, by force of circumstances beyond his control, to remain several days at a time in quarters that, to say the least, are not too congenial ; but necessity knows no law, and when the temperature of the room in which he is trying to sleep goes down to 15° below zero, he puts on his fur coat, covers himself with blankets and robes, and tries in vain to snatch a few hours' repose. All travelling must be done with a horse and vehicle, and many of our Inspectors have to travel in this way between two and three thousand miles a year. This is the case especially with some of the Protestant Inspectors whose schools are isolated and far apart. Of course all Inspectors must be able to speak both languages, as the English Inspectors in the discharge of their duties have to travel through districts which are entirely French, and *vice versa.*

The elementary school Inspectors are paid salaries averaging from $700 to $1,000, with $10.00 additional for postage. Those who receive $1,000.00 have either a larger number of schools to inspect, or a larger extent of territory over which to travel. After paying travelling expenses, cost of living, etc., it can be easily seen that the average school Inspector does not become suddenly or enormously wealthy, and is scarcely ever mistaken for a Rockfeller, a Morgan, or a Carnegie.

Previous to 1899, School Inspectors were required to visit each school twice during the year. This regulation has been changed, and at the present time it is the duty of School Inspectors to hold Educational Conferences with the teachers, school commissioners and trustees of their respective inspectorates at suitable and convenient

centres during the first half of each scholastic year, and to visit each school under their control, the second half, giving two hours on average to the inspection of each school.

Accordingly, about the first week in September the Inspector makes his arrangements to begin this work. Teachers are notified to be present on a given day and hour at the place appointed for the meeting, and it is not unusual to find all the teachers within a given radius present. The Inspector takes up the different subjects in the course of study, and gives model lessons illustrating the best methods of teaching these subjects. School organization, management and discipline are dwelt upon in detail—a question box is provided and teachers are encouraged to ask questions relating to their work, or upon any difficulty they may have encountered in the school-room. At the close of each session, these questions are read aloud and answered by the inspector.

At a meeting of the Protestant Inspectors of Quebec, held in July, 1901, it was agreed that the following programme for these conferences be adopted for the next three years, and that the meetings be held as early as possible in the season :

Subjects :—

First year—Scripture, Morals, English, School Management.

Second year—Arithmetic, Object Lessons, School Management.

Third year—Geography, History, School Management.

Teachers are requested to mention the requirements of their schools,—the Inspector makes a note of these, and when he meets the School Board the same evening, he draws their attention to these things and extracts a promise that these matters will receive their immediate consideration. The expenses incurred by the teachers while in attendance at these conferences are defrayed by the Department of Public Instruction—the Inspectors, one and all, report that these pedagogical conferences are largely attended and that the results are extremely beneficial to education.

At the close of the conference with the teachers, the Inspector meets the School Board to discuss the best means of promoting the interests of education in the municipality. He is enabled to point out the requirements of each school, and also to give any information that may be required.

In the evening a public meeting is held at which the Inspector has an opportunity of making clear to all the actual condition of their elementary schools, and to impress upon the mind of parent,

commissioner, teacher, ratepayer, and secy.-treasurer that unity is strength, that each has his or her part to do in advancing the cause of education.

At the evening meeting assistance is given by the local clergymen, and sometimes by the Secretary of the Department of Public Instruction.

The Secy-treasurers of school boards have to be visited to ascertain if their books are kept in accordance with the authorized form—when they were audited—what is the rate of taxation—the number of children between five and sixteen years of age in the municipality, and other statistics. It is the Inspector's duty to visit the teachers, who, having retired from active service on account of illness or age, are in receipt of an annual pension based upon the amount of the average salary received during the time they were engaged in teaching.

In order to encourage teachers who are doing faithful and efficient work in our elementary schools, bonuses are granted yearly by the Superintendent of Public Instruction, upon recommendation of the School Inspector, to those teachers who have done the best work during the year. The amount of the cheque depends upon the number of teachers recommended by each Inspector. If an Inspector sends in the names of 10 per cent. of his teachers, each teacher thus recommended will receive a cheque for $18.00. If the Inspector sends a larger number of names, the cheque in each case will be smaller. Therefore, it is the Inspector's duty when visiting a school to make careful notes on the efficiency of each teacher in order that no injustice may be done. This tangible recognition for services rendered is gladly welcomed by the teachers who receive it, and their names are published in the Superintendent's annual report.

Another duty which frequently devolves upon the Inspector is the settlement of disputes which are continually arising in some district of his inspectorate. There is always a man with a grievance —real or imaginary. The commissioners are not doing their duty, or they are acting unfairly in some way. Some difficulty has arisen with the teacher, or with some other ratepayer. Appeals are made to the Superintendent, and finally the matter is left to the Inspector for settlement, other qualifications than those required by law are now necessary—tact, common sense, unbiased judgment coupled with an intimate knowledge of all the facts of the case together with a reputation for strict impartiality and an honest endeavor to do what is

right and just between man and man are the qualifications which render it possible for an Inspector to settle amicably disputes which without his intervention might continue for years and keep the district in a state of turmoil and agitation fatal to the cause of education.

In addition to the ordinary government grant, certain municipalities which are paying a high rate of taxation, upon recommendation from the Inspector receive a supplementary grant from a fund provided for this purpose. This grant is given upon the express condition that the municipalities receiving it carry out the instructions of the Inspector in regard to the use to which it shall be put. School Boards are desirous of carrying out the suggestions in order that they may receive a share of this grant which is to be devoted to the purchase of school apparatus, equipment, or to extend the length of the term ; consequently there is a marked activity in many municipalities, and as a result, the schools are better equipped, the teachers are in a position to do better work, the pupils make more progress and the work of education advances. The second half of the year is devoted to the inspection of schools of which each Inspector has from one hundred to one hundred and fifty. He has to examine the school building carefully to ascertain if they are in a good state of repair and in a proper sanitary condition. All defects are to be noted and a report on the same made to the School Board, and also what action should be taken in connection therewith to remedy these defects. He has to see that each school has a proper playground,—the minimum area required by law being half an acre. This ground should be properly graded, drained and fenced. School Boards and teachers are encouraged to have the grounds as well kept as possible, for without a playground for the development of the physical part of their nature, pupils are deprived of one-third of their education. Prizes are given annually by the Protestant Committee for the best kept grounds among the Superior Schools. These awards are made upon recommendation by the Inspector of Superior Schools. It is to be hoped that some such incentive will be given to the elementary schools for this purpose.

During the time an Inspector is not on the road, he is engaged in office work—answering his numerous correspondents, preparing his bulletins of inspection, reports to the Superintendent, to School Boards, instructions to teachers, preparing his lectures for the pedagogical conferences, and compiling statistics for his annual report.

I have thus endeavoured to outline the duties of an Inspector outside the schoolroom in relation to the Superintendent, committees, school boards, teachers, pensioners, and secretary-treasurers, yet there is one more important duty I must mention before closing, *i.e.*, the Inspector's duty towards himself. As he travels through the length and breadth of the land, he is watched, criticized, and commented upon from the time he leaves his native village until he reaches the most remote rural hamlet. Sometimes this criticism is favourable, sometimes adverse. He must, therefore, be temperate in thought, word, and deed, never forgetting that his influence is far-reaching, and such being the case, he should make it clear and plain at all times and in all places that he is on the side of righteousness and truth, and that he is doing all in his power for the uplifting and up-building of humanity. We cannot close our eyes to the fact that School Inspectors are not the most popular class in the country. It should, therefore, be the sole aim and endeavor of each to do his work so faithfully and efficiently as to leave no room for adverse criticism. Let us do our best, never forgetting that—

" To Duty firm, to Conscience true,
  However tried and pressed,
In God's clear sight, high work we do
  If we but do our best."

DUTIES OF AN INSPECTOR INSIDE THE SCHOOL-ROOM.

By J. W. McOuat, B.A., Lachute, Que.

The topic assigned me this afternoon is one of the most important that can be placed on an educational programme, and I feel it is quite beyond my powers to do the subject justice, especially before such an assembly of learning and experience. However, I shall endeavour to introduce the subject in a concise and comprehensive outline, and shall present, therewith, observations and deductions arising from my own experience in the work. In the first place, then, I would invite you to consider,

(1) *The Inspector in Preparation.*—Without preparation no good results can be obtained, and I would, therefore, suggest that early in the beginning of each year, as soon as the teachers' addresses can be obtained, the Inspector should mail to each member of his staff a carefully prepared and complete set ofinstruc tions. These instructions should contain salient points on the methods of teaching each subject, suggestions to the teachers based on the results of the previous year, and general information regarding the work of the ensuing year. With these instructions in their possession the teachers are able to classify their pupils and arrange the work, giving due respect to the plans of the Inspector, who will thus give a general impress to the school work and will be better understood and welcomed when he visits the schools.

The Inspector, like the teacher, should know, not only the subjects of the course, but also the contents of each text-book used by the pupils. It is a poor display of fitness to see a teacher hugging the text-book, but it is much worse for the Inspector to depend upon it. While this is evident in the case of new text-books, it is also true of the oldest text-book in use, for by our familiarity with a text we often follow in the same groove year after year, and it needs an annual preparation to wake us up, and make us fresh and vigorous in the school-room.

As a further preparation it is well for the Inspector, before beginning his work each year, to determine upon what portions and features of the schoolwork he will conduct his examinations. In such exact subjects as Grammar and Arithmetic, it is well to prepare a few sets of questions upon the work of the senior classes. In this way the work will be thoroughly done, and the examination will be helpful to the school, by discovering values and revealing defects.

Another line of preparation consists in issuing to the teachers, some weeks previous to his visit, such forms as will enable them to prepare the statistics and other information called for in the bulletin of inspection. This will lessen the routine work on the day of the Inspector's visit, and enable him to proceed almost at once with the examination and inspection of the school. The teachers might be expected to prepare the statistics in general form, but I prefer to

send them a special form corresponding exactly with the bulletin of inspection for the year.

It is well also to provide a space for private notes on the peculiar needs of each school, other than those called for in the printed forms. These notes may be taken most conveniently on a supply of blank pages bound along with the Inspector's bulletin book. On these pages, also, notes should be taken, that indicate desirable changes in the work for another year.

Having prepared himself along the foregoing lines, and having met his teachers in the annual autumn conferences, and given his detailed instructions, an Inspector is now ready to begin his work, but, before he enters the school-room, let us determine "what shall be the nature of his visits."

(1) *The Inspector's Annual Visits.*—I would predicate of these surety and regularity. Unless they are sure and regular much of value will be lost. If the impression prevails that the inspector "may or may not come," he will find a corresponding uncertainty characterizing the school work when he does come. He will also find the whole community speedily losing confidence and becoming indifferent to the interests of education. Each school must, therefore, be regularly visited. His visits should be welcomed and helpful. This will be true of his visits in so far as he has a true conception of his work. If he looks upon himself as a detective spying out the leanness of the school and looking chiefly for imperfections, his visits will certainly be neither welcomed nor helpful. If on the other hand he regards himself as principal of a large staff of teachers, sharing with them the responsiblity of success or failure; sympathizing, suggesting, advising, his visits will be welcomed and very helpful too.

Having noticed "the Inspector in preparation" and considered "the nature of his visits," we are now prepared, with his permission, to visit the school-room with him and watch his methods of work therein. The visit being over we conclude as follows:

(3) *The Inspector in the School-room.*—Must be cheerful—much depends on first impressions especially with children, and it is well to win their confidence at the beginning. This may be readily done by the Inspector in his introductory remarks, which ought to be simple, frank and friendly. If these remarks twinkle with merriment so much the better, for nothing tends to relieve nervous tension better than a little laughter. Laughter is childlike and whosoever

can cause children to be merry has won their confidence for the time. It is also quite proper for the Inspector to tell the pupils, that he is anxious to make a good report and ask them to help him give their school a good name. He has now introduced himself, reduced the school to a normal condition and is ready to begin.

He must now use *tact* and *judgment*, and before calling any of the classes there are two things he should do—(*a*) He should inspect each pupil's desk while the occupant is present, noting any defacements thereon and receiving such explanations as may be given. (*b*) After expressing his opinion of the state of the furniture he ought to grant an intermission for the purpose of ventilating the room and invigorating the pupils. During this intermission he can enter the statistics from the special form, previously filled in by the teacher; seek to know the methods of discipline used, and collect such other information as is best gathered in the absence of the pupils. Amongst other things, he should ask for the copy of his general instructions sent out in the beginning of the year and for other outlines of the work distributed at the conferences. He may have a set of his own along with him, but by asking for those sent to the teacher he will impress her with their importance and discover whether she has obeyed or neglected the directions given her. In any case the Inspector should follow his own outline in the examination of the school. These things being arranged it is time to call the pupils to their places. This the teacher should do, while their conduct and order, as well as the teacher's methods are noted by the Inspector.

He should *teach*, *examine*, *inspect*, and should arrange the progress of the work, so that he may exercise these three functions quietly and without declaring his intentions to the school.

To accomplish this he should arrange the pupils of the senior classes for written work in Grammar and Arithmetic, then he may ask the teacher to "assist" by hearing one of the junior classes, while he is occupied placing his questions on the blackboard. He may thus for a time observe the teacher's methods of teaching and may continue her "assistance" further, while he examines the the writing and drawing or makes additional notes. In my opinion the chief part of the work in each grade ought to be done by the Inspector himself, and when the teacher is experienced and competent, the Inspector should conduct the examination himself, ranking the teacher's methods according to "*results.*" In most cases,

however, it is well to give the teacher a part of the work to do, as it affords her an opportunity to exhibit her best "*points*" in the classwork, adds to her experience and increases her confidence in herself. Having observed the teacher's methods the Inspector should then take charge of the classes, teaching, as well as examining, while the teacher in her turn may observe his methods. Now his preparation will prove valuable to the school; his new model lessons in the different subjects; his fresh questions and new ideas; his off-hand knowledge of their text-books; his fund of interesting information, all bearing upon the lessons, added to the vigorous and happy manner in which he handles the classes, will leave an impression on teacher and pupils long to be remembered. An hour has passed and the work assigned the senior classes in Grammar and Arithmetic is done and ready for inspection, and the teacher may once more be given an opportunity to take charge of some of the classes while the Inspector looks over the written replies. This time the teacher has charge of a senior class and will be found endeavoring *to emulate* the work she has been recently observing at the hands of the Inspector. She has not been asked to teach for observation, nor was she told to make notes, yet both exercises are going on quietly and profitably in turn. Once more the Inspector is free to resume the classwork with the senior classes, and the work proceeds to a finish, while the younger pupils having had sufficient attention may be granted a further intermission.

In every case, however, the Inspector must have had some part in the examination of each class and must have noticed to some extent every pupil present. It is very important that we should win the sympathies of the parents, who are the public, and one of the simplest and surest ways to do so, is by giving attention to their children in the school-room, hence it is that none should be overlooked in the work of inspection.

In the examination of the classes it is well to combine the subjects as much as possible in a practical form, and to slide from one subject to another without any definite announcement of the change, somewhat in the manner that persons pass along from topic to topic in a general conversation. In this way pupils do better, learn more, and are happier than if the idea of examinations be kept prominently before them.

While one of the senior classes is before the Inspector, the teacher may secure from the other pupils specimens of class-work in

writing, drawing, figures, and composition to be submitted at the close of the visit. In this respect it is well for the Inspector to have with him some of the best samples of school work from other schools, which he could exhibit encouragingly to the teacher and pupils, urging them to emulation in producing like good results. I have seen pupils in ecstatic delight over the specimen work of other schools, and I have known a whole school, both teacher and pupils, get an entirely new idea of school work from such an inspection. Quite dissatisfied with their own attainments and impatient to try again, future returns proved the value of the lesson and now such schools rank among the best. "Seeing is believing," with children, and they can best imitate what they have seen ; then let us place before them our highest ideals.

Throughout his examination of a school the Inspector should note all good points, that is, points of special value, and ask if there are any other special features in the school work which the teacher would be pleased to mention. It sometimes happens that certain valuable features of the work have escaped observation, and it is only fair to the teacher to ask her if all the good points in her school work have been taken into account. In my own experience it has frequently occurred that teachers, in response to this question, have been able to add materially to the credit of their school. Moreover, I have found in these unfrequented paths some very valuable ideas and some truly original methods quite worthy of consideration. On the other hand, in this way I have discovered the reason for unsatisfactory results, and had, thus, an opportunity to advise the teacher wherein I thought she might improve her methods. Therefore I say, "Let the teacher speak before concluding your notes on her work."

While we have, more properly speaking, to do with the work of the school-room, it is also our duty to secure from the public all that is essential to good work, and one of the best methods of reaching the public is through the pupils of the school. The Inspector, therefore, should reserve a few moments at the close of his visit to communicate to the pupils the result of his examination. It is of much importance that his remarks should be wisely chosen and carefully expressed, for his ideas, if not his words, will be reproduced in every home. He should, as far as possible, congratulate the pupils on the results of their work, telling them wherein they excel and indicating such points as require attention. He should also

speak well of the teacher, the parents, and the school board, express his pleasure in noting the improvements recently made, and assure the pupils of his confidence in their abilities to improve the standing of their school. It is also proper to mention such enactments of the Educational Department as are of immediate interest to the pupils. For example, last year each Inspector in the Province of Quebec could promise a map of the province to each school in the name of the Provincial Government, while this year each Protestant Inspector can promise, in the name of the Protestant Committee, a suitable English dictionary or a set of supplementary readers to each of his schools. Such items of news are too good to omit from an address either to pupils or to those engaged in the work of inspection and training. A judicious word of praise to the pupils for their good conduct and pleasant co-operation should close the Inspector's remarks, whereupon the teacher resumes control of the school and dismisses the pupils, while the Inspector has a third opportunity to note the order and discipline of the pupils in motion, and then the eventful day is over for the pupils, while a brief and honest entry in the visitor's register and a final word of advice to the teachers should close the whole proceedings.

It may appear heterodox to declare, that neither parents, public, nor the school board should be present on the day of the Inspector's annual visit. That, however, is my opinion and these are some of my reasons "Why?"

(*a*) Because they do not appreciate true educational work and become wearied and unfavourably impressed by the classwork unless it be brilliant! Whereas, we know, that the best results are found in response to questions, which the pupils cannot answer without reflection.

(*b*) Because if the public be present it becomes necessary for the Inspector to sacrifice the efficiency of his examination, to some extent, in order to save the efficiency of the school in the public estimation. He wants results, the public wants display.

(*c*) Because of the nervous tension and the general distraction, the crowded room and impoverished atmosphere engendered by their presence, the public are better absent. For these reasons I hold, that, while the public should have its day and the Inspector may be present if possible, *the Inspector should have the school to himself on the day of his official visit.*

It now becomes the Inspector's duty to make known the results of his visit to the school board, but in doing so he must exercise the same tact and judgment he displayed in the school-room. He need not mention many minor matters in the school work, which the teacher may be expected to care for and which the board would not properly understand, but he should call the board's attention to the general trend of the school work and submit a statement of the results in each subject in tabular form. His report ought, also, to make know the material needs of the school and contain suggestions for its betterment If it be objected, that this would entail much labor, I would reply, "Labor omina vincit," and that in no respect have we more difficulties to conquer and better results for our labor than in the preparation of careful and detailed reports to our public school boards. In conclusion, I would say of the Inspector in the school-room, that he must be a man of broad sympathies, kind, considerate, liberal, ready to recognize merit, quick to notice defects, not prone to grumble, apt to suggest, not easily discouraged, full of hope, strong in his convictions, energetic in his work, never admitting defeat, but ever aspiring to do better things and leading the way.

NOTE.—In the Province of Quebec the Inspector has to *examine* and *inspect* on the day of his visit; in some other provinces examination papers are submited at the close of each year and the inspector's work on the day of his visit may enter less into examination details.

THE INSPECTOR IN THE SCHOOL-ROOM.

I.—INSPECTOR IN PREPARATION.

1. He should issue definite instructions early each year.
2. He should know the contents of each text-book in use.
3. He should determine upon what portions and features of the work he will examine upon.
4. He should issue statistical forms.
5. He should provide for private notes.

II.—THE NATURE OF HIS VISITS.

1. They must be sure and regular.
2. They should be welcome and helpful,

III.—THE INSPECTOR AMONG THE PUPILS.

1. He must be cheerful.
2. He must use tact and judgment.
3. He should teach, examine, inspect.
4. He should have to do with each class and every pupil.
5. In his examinations he should combine subjects in a practical form.
6. Should exhibit specimens of work.
7. He should note all good and ask the teacher for more.
8. He should state results to the pupils.
9. No parents or public ought to be present.
10. Should send a report to the school board.

THE TEACHING OF FRENCH.

By N. T. TRUELL, Lachute, Que.

Much of our enjoyment in life, much of the good we do in the world, comes of our ability to make our fellows share our thoughts and feelings, and to rightly understand the lives and actions of others. To do this there must be an interchange of words, of ideas and sentiments. Language is the means of communication. It enables us to understand the expressed thoughts of others, and to give expression to thoughts of our own. To be of the greatest service to mankind and to obtain the greatest good from life, we must therefore have command of language. The study of foreign languages has ever had a prominent place in the school curricula of all nations. A few centuries ago everything that was worth reading was in Latin or Greek. A person not familiar with those languages had no access to the stores of learning, the thoughts of the wise men of his own time as well as those of former ages were hidden from him. The doors of education were effectively locked to him. He could not become a scholar. This state of affairs no longer exists. The vast mines of thought opened up by English writers,

past and present, are open before us, excellent English translations of Athenian and Roman lore are at our disposal, the literature of all modern nations is translated into English by skilled linguists, yet there is still an ever-increasing demand on the part of all true educators for the study of foreign languages. The necessity which once prompted a study of Latin and Greek has been removed to a certain extent by the translator, but the necessity for studying modern languages will perhaps never be over-come. It is an established principle that to understand perfectly the works of a modern writer we must be able to place ourselves in his environment, we must speak his language, think his thoughts, and live his life.

"He who knows two languages," said Napoleon, "is two-souled." "Language," says another writer, "is the register where every nation puts down its moral and intellectual conquest." The surest and most efficacious means of penetrating the genius and character of nations is to study, in their own language, their institutions, the geography of their country, and their history. It is not enough known how differently the same events are related and judged, according to the nationality of the writer. True independence of judgment is only to be found through the knowledge of languages. Translations therefore can never be a satisfactory substitute for the original writings of modern authors.

Ancient and Modern languages both have their place in education. It is not the province of this paper to discuss the study of Latin and Greek in our schools, nor do I wish to in any way make light of their unquestionable value as school subjects or belittle their usefulness as a means to an end in the education of the youth of Canada. If the educational worth of Modern Languages in general and of French in particular is here contrasted with that of Ancient Languages it is for the purpose of accentuating the desirability of giving more attention to the former rather than of depreciating the advantages to be derived from a study of the latter.

Starting with the premises that a child's education is not complete if he has command of but one tongue, it is necessary to make choice of a second. In selecting a foreign language, we must consider its utility to the learner, and its intrinsic value as an educative element. The utility of the language is in direct proportion to its universality. In Canada, the French language is nearly as much used as our own, and its use is on the increase. In

all European countries French is spoken by a large proportion of the population. I think the statement will pass unchallenged, that to our Canadian children no other foreign language is equally useful. As an educative element, it takes a prominent place among the other languages. Its unsurpassed precision and clearness, its capability of expressing every idea in laconic, and in the most ornamental style, its adaptability to the lightest literature, and to the most profound diction of science, are well known and well appreciated. The rich mines of French literature, but too imperfectly known, offer, in every department of knowledge, treasures equal to those presented by the literature of any other nation. Therefore, if we are to select a foreign language to be taught in our schools, using as a primary base for making our choice, the usefulness of the acquired language to the pupil and the value as a mind drill which the study of it affords him, it seems to me that the choice of the French language should be unanimous. But does the study of French in the schools of Canada afford a valuable mind drill? Does the student of French acquire any useful knowledge? "You cannot learn French at school," has become a trite saying in many English speaking communities. Is the statement true or is it false? These are questions which the teachers of Canada can answer for themselves and for the sake of our collective reputation, perhaps it would be well if we answered them to ourselves. Let us consider the last question for a moment. Is it true that one cannot learn French at school? What is the history of the past? How many of you who are present who have been educated wholly in English speaking schools, and who have studied French in those schools, speak, read and write that language even moderately well? I am afraid that this test would seem to prove by the experience of the past that the statement is true. Would a similar test applied to the school children of Canada to-day bring forth a similar response? We know that in most instances it would. Our English speaking pupils attending English schools do not, generally speaking, obtain sufficient knowledge of the French language to enable them to read it fluently, write it readily or sustain a ten minute's conversation on common topics.

Hence we must conclude that the teachers of Canada have for many years been attempting to teach something which they could not teach, either because it is impossible, or because their methods have been and still are defective. To admit either the one alterna-

tive or the other is to pass a sentence of self-condemnation, for it must be remembered that one of the chief reasons for selecting French as a school subject is that a practical knowledge of the language will be of service to the learner. If he does not acquire that knowledge that reason for studying it cannot be advanced.

The other chief purpose in teaching French is to afford a sound drill for the mind. It is generally acknowledged that Latin affords a better means for exercising the reasoning faculties, but it is claimed that a modern language gives a better drill to the reflexive powers. If a child is not able to use the language, either in speaking or in writing he is not able to exercise his reflexive powers, and thus, as a mind drill, the language loses much of its value. But we must not hesitate to criticise ourselves if we are in the wrong. If it is impossible to teach our pupils a practical knowledge of the language let us say so, and let us exchange French for some subject which will be of educational advantage to them. On the other hand, if it is possible to give our pupils a working knowledge of the language let us look about us for the way out of our difficulty, and let us hasten the time when we shall be able to say to our critics : "The results of our teaching refute your words."

It is not impossible to teach English-speaking boys and girls attending our English schools to speak and write the French language. I do not mean that it is possible in the few years they are with us to make them masters of the language, but it is possible for them to acquire a fairly large vocabulary and to employ it with fluency. I asked you a moment ago to prove by your own experience that it is not done in our schools generally, so presently I shall ask you to grant, by the experience of a few of our schools, that it may be done generally.

Let us look at Nature and her results. A young child enters the primary grade of one of our common schools. His answers to the few questions put to him are in well-framed sentences. The teacher, noticing the arrangement of his words, puts a few more questions to him. His replies are still in faultless English, his very tone of tone of voice is refined. A mental picture of the home surroundings of the child may be easily drawn. At six years of age he has mastered the art of speaking correctly. He did not learn it by rules or by theory, he acquired it, as an art must be acquired, by practice. Had his home surroundings been different, his language

would have been different, his voice would have been different. His acquired art would have been of a different order.

Walking is a scientific movement, yet the world did not wait for the discovery of the laws of gravitation before making use of the art of walking. To the world at large it is still an art. If a child does not walk scientifically we show him how to do so, but without any reference to the general principles of equilibrium. If he makes an error in English we correct the error again and again if necessary, but without referring to the rules of grammar which he has transgressed. Why should the method by which a child learns our living language not be used to teach him a second living language? For the past twelve years the oral, or natural method of teaching French, which has been defined as a "modified imitation of the process by which a child becomes familiar with his mother tongue," has been in use in the schools of Montreal. The course includes conversational practice, reading lessons, dictation, written exercises, and a fair amount of grammar, but not a word of translation, not a sylablle of English. The method has been employed in several other centres of the province of Quebec, but for a shorter period Speaking of the result obtained, Mr. H. H. Curtis, Director of French in the Protestant Public Schools of Montreal, made the following statement a few years ago in the writer's hearing, "Within well-defined limits our students learn to speak, to read, and to write. They do not learn the French language—that is the work of a life-time—but they become familiar with a good part of the essential language of current speech. Their knowledge is sufficient to be a source of pleasure and of profit." Mr. S. H. Parsons, principal of the Victoria School, Montreal, stated to the writer last fall that any pupil who has taken the Public School course in the schools of Montreal within the last few years has a practical knowledge of the French language. If it is possible to give the pupils in the schools of Montreal a practical knowledge of the French language, why should it not be possible to do so in all our Canadian schools?

I have asked you to admit that the old system has proved a failure. I have asked you to admit that when tried the natural method has been a success. This is merely a case of cause and effect. By the old system we have ground into the student a long list of grammatical rules. We have sought to illustrate these rules by long exercises of meaningless disconnected sentences. The lesson has been tedious in the extreme. We have had no enthusiasm.

What teacher or what pupil could enthuse over an exercise like this: "Has your brother that lady's umbrella;" "I have your slate and your brother's;" "Has the cook a silver salt stand?" These are sentences take at random from a popular text book. The teachers and the pupils are spending year after year translating such meaningless trash as that. During the second year in addition to such questions as: "Does the banker go to the hair dresser's this morning?" "Has the joiner read the 2nd Volume of Gibbon's Rome?", there is added a reader containing selections from the ablest French writers which the class are expected to translate and perhaps re-translate by the aid of a lexicon. Speaking of this part of the work a recent critic has said with much truth, "Here the folly reaches its climax." In order to translate one language into another it seems patent to the most simple minded that one should know both languages well. Nothing is more painfully ridiculous than to pretend to translate a language one does not know. Translation is not a means of studying a modern language and it not ought not to be made such, it is the result of study. Each language being the result of one individual notion, translation renders only that part of a language which is common to all civilized nations, but the rest, the essential part of the flavour, the individuality of the language, escapes. Throughout his entire course the pupil works around an equlateral triangle instead of moving in a straight line. If he wishes to make a statement he conceives the idea, puts it into English and then translates it into poor French. In teaching French by the natural method a course diametrically opposed to this is pursued. The first point to be gained is the interest and enthusiasm of both teacher and pupils. The teacher using the French language entirely in the class, contrives to make the pupils understand the meaning of a few words. In a few lessons the child is able to compose a large number of sentences. From the commencement his words and his thoughts are entirely in French. His interest is keen, his reasoning is direct, he thinks in French and expresses his thoughts in French. For the time he quite oblivious of the fact that he is by birth English speaking. He is delighted with himself and with all around him. He is thrilled by the thought that he can speak French and with a skillful teacher his eagerness for a knowledge of the language and his enthusiasm in class will never wane. Day by day his vocabulary increases, his power to make new sentences is enlarged, he learns to write these sentences and to read them when he sees them written.

All this without a word of English. He converses with his teacher and with his classmates from the first. The circle in which the conversation must turn is very limited for a time, but it is constantly widening and the child sees the growing process going on and seldom realizes that his vocabulary is really very small. He can read, he can write better and better every day. It is not necessary to give a minute description of the natural method. Its principles are well known, and a complete set of teachers' manuals and texts can be had from any bookseller, giving a more comprehensive view of the method than it would be possible to give in this paper, and the matter is worthy of the most serious consideration of every teacher of French.

To the radical reform, says a recent writer, the process of evolution is an exasperatingly slow one. A sudden revolution upon the basis of his ideas appears to him to be the only proceedure for making the world realize its present possibilities. But the days of Basedow and Rousseau are over. He who would work the greatest educational reform must follow in the steps of Pestalozzi, Froebel and later reformers, and by the slower yet surer process of evolution develop his methods without violent interference with prevailing customs and routine.

There is no necessity for a sudden revolution. The inauguration of an immediate change from the translation method to the natural method would be disastrous, I believe, to the teaching of French. But let its adoption be gradual. The former has been tried, and has been found woefully wanting, under the most favourable circumstances. The latter has been tried, and under reasonable conditions has proved a success. Its general use, in the schools of all Canada is, in my opinion, only a matter of time.

The teacher who would make a success of teaching French by the natural method must be alive to the deficiences of the translation method. He must be able to pronounce correctly and to speak fluently. It is not necessary that he should possess a large vocabulary at the start. He must be thoroughly in earnest. He must have snap enough to pursue the course himself as vigorously as he expects his class to pursue it. He must be resourceful and create innumerable devices for awakening the interest of his pupils. He must cause them to express themselves in language of their own, at the same time being careful that he keeps the conversation well within the confines of their knowledge. He must steer clear of the

anomalies and subtleties dear to the heart of an examiner, until his pupils have attained proficiency in small every-day conversations. In short, he must know his subject and must be a teacher to the manner born.

I do not think that it would be possible to adopt this method in all the schools of Canada today, but the time is not far distant when a large proportion of our teachers will be competent to teach French by the oral method. In the Province of Quebec, much has been done already in this direction. All intending teachers must attend the Normal School, where a thorough course in oral French is provided. No doubt similar courses are given in the other Provinces.

In view of the public condemnation which the present system of teaching French has received, and considering the great strides made towards improvement in the past decade, may we not hope that ere another ten years has passed by, the stigma so long resting upon the teaching of French in the schools of Canada may have been lifted, and that the next generation of English-speaking boys and girls from the Atlantic to the Pacific, may be able to express their thoughts with fluency in either of the two languages.

THE PSYCHOLOGY OF NATURE STUDY.

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"Education proceeds from the real to the ideal." This is my favorite educational maxim. It sums up all others. Obey this and you will transgress none. The subject matter of instruction is determined by this principle.

We must begin instruction with objects—things with three dimensions in space, and these dimensions determine the form of the object. These objects may be natural or manufactured but the natural should precede the artificial.

In the evolution of the race natural objects were first of interest—utilitarian interest—and I think we are safe in saying that all interest is *based* on the use of things. To nature, the savage looked and looks to-day for food and raiment and so do we all—in time he learned

to change somewhat the relation of their parts. Instead of accepting the umbrageous shade of the natural tree, he lopped of branches and enclosed himself in an artificial lodge, and thus began the art of architecture, the lowest stage of expression and consequently the material for mental suggestion in the lowest stage of instruction by means of artificial things.

The natural object—tree, cave or bank—suggested to his potential mind a more perfect structure. This became his ideal and was eventually embodied or realized in the wigwam, tepee or artificial cave. These suggested more perfect structures and as these were realized there was development and progress. Those races which have not acted upon these suggestions have not developed *e.g.* Indians. Why should the child pass through a similar process? What is to be gained by placing before the child the natural object, which is irregular and comprehensive rather than the regular and particular manufactured form, *e.g.* cube, sphere, cylinder?

There are two reasons, (1) If the child proceeds from the irregular to the regular, he must put into the process a personal element, an individual factor, and there will be development. There will then be mental activity, not mere mechanical copying.

(2) There is encouragement. The child has produced something 'all his own'—something which may be considered an improvement on the natural object.

Now if you present the perfect cube to the child, he can examine it but cannot imagine a more perfect form. There is no personal element in his study of it. If he attempts to make a model of it, he cannot make as perfect a form and he will be discouraged. What about the cube in the Kindergarten? Should it be there? Does its introduction there corresponds to its introduction in the history of the race? Did Froebel make a mistake? I think he did and we are perpetuating it in our Kindergartens still.

The first argument, then, for Nature Study is:—"It furnishes suggestive forms. In observing these the imagination is exercised and developed and in modelling these forms or the more regular suggested forms, the child makes mental progress, attains to success, is encouraged to try again and these results react on the observing powers to make them more acute, hungrier for material to act upon. Dr. G. Stanley Hall, in the N. E. A. in July said, "Less time should be devoted to Arithmetic and Reading before eight years of age and more to Nature-Study." If Nature-study is introduced and taught to

the lower forms there will be no loss of time on account of it in the higher forms. We do not propose to lessen the training in literature mathematics, etc., but to supplement it. The basis of Composition and Literature, Geography and Drawing is in this study. It is not really adding anything to the curriculum but will do a great deal to arouse interest in the subjects already studied.

The next stage in the process of development is the representation, or is through the representation, of these natural objects on surfaces. where only two dimensions in space are possible. In this, color and shading are essential—to the child indispensable. In a picture only form color and proportion (number) can be represented, and the depth can be very inadequately shown. All other features of the real object are wholly ideal. Hence the importance of form, color and number in elementary education. If the child has not studied these, the value of pictures will be much lessened.

Shall we study form, color and proportion in natural or in artificial objects ? Is there sufficient color in creation to interest and instruct the child ? There is no question in my mind of the superiority of natural objects over artificial ones in the study of color and shading. Can geometric form and dimension adequately represent the glorious splendor of the western heavens, painted by the rays of the setting sun ? Can any manufactured spectrum adequately show the perfect blending and shading from red and orange through yellow and green to the cerulean blue of heaven's dome ? Can the rapidly changing dissolving and blending be even suggested by anything short of the heaven's themselves ? Can the lily be painted or the rose adorned ?

Here too Nature-Study has a claim to our attention, based on sound psychological principles. The study of color and brightness in field and flower, in sky and hill should precede all artificial work in color and shading. We need more faith in Nature-Study from kindergarden to university.

Drawing, then, the second stage in thought expression, should be based on Nature-study. Natural objects, such as trees, flowers, animals, should be the subject matter for the first two or three years of instruction in drawing. The exact order of development we may leave to the drawing masters to determine.

The next stage in mental development is in the use of diagrams ; that is to say only after objects and drawings which represent these objects have been utilized thought expression and thought suggestion

may be cultivated by means of diagrams aided by verbal explanation. At this stage, but not before, geometric forms may be introduced. These diagrams have two dimensions, but details are omitted, and usually volume is not expressed. The mind must supply all these for itself and in so doing is profitably exercised, while the diagram itself aids in making clearer some feature at the subject under discussion than could be made by the use of words alone. This power to understand and to construct diagrams is particularly important in all sciences. For example no two plants have exactly the same inflorescence, yet there is agreement in some underlying principle *e. g.* in flowering from below upward and a diagram may be made to show this and this only. So in physics a diagram may be made to show the images produced by mirrors and lenses.

This is an advance in ideality and should be carefully avoided with younger children yet just as carefully introduced at the right period. It is the basis of classification. Nature study up to twelve or thirteen years of age would have no use for diagrams, and when introduced should be introduced as all symbols are or should be—only after the idea has been clearly grasped through the presentation of material objects, etc. Having laid a firm foundation through the use of objects, drawings and diagrams, we shall have prepared our pupils for the highest stage of mental development—the study of relations, which of itself is purely ideal—that is wholly mental, for relationship exists only in the mind. Education may now proceed with the use of mere symbols. The difficulty in Nature-Study and all sciences is that we are to apt to tarry too long in the early stages and never reach the latter stage, at all. The notion that Nature Study should begin with the high school period is entirely wrong as children have then reached a stage when symbols may be profitably used. It is in the public schools that the first two stages at least, should be passed and then we shall have pupils capable of actually studying science in our High Schools and Universities, instead of, as at present, being required to give their attention to object lessons at an age when they very naturally despise a childish method of study.

Of course, there can never be a divorce of any one of these stages from another. In the first stage, relations will be noted and symbols used, and in the last, objects, drawings and diagrams must always be in evidence. But each stage has its predominant mental activity and means of instruction and expression.

What human needs are satisfied by the study of natural objects?

(1) *Inherited tendencies.*—Primeval man was entirely dependent upon nature, while we are still dependent, but often indirectly. Hence we need to study nature to understand the laws and to preserve the race.

(2) *Activity of the Senses.*—The normal state of these senses is activity. The satisfaction of this desire for activity is pleasurable, and is the basis of the child's interest in the world about him. This interest is especially intense for moving things or for changing things. The former includes animal life and physical force, the latter, growing things (plants and animals), and material things, acted on by some force, physical, or chemical resulting in change of shape or volume, appearance, hardness, etc. These form the bases of the sciences Zoology, Botany, Physics, and Chemistry. The age during which the activity of these senses is most pleasurable and profitable, in the way of forming clear perceptions and rousing mental activity is from three years of age to the end of public school life (fourteen years). If they are not exercised during that period, you will find just what is found today in our High Schools, *i.e.*, a lack of interest in observing, or a want of confidence in the efficiency of the organs of sense, or in the case of teachers and professors, lack of the sense of its importance. The latter is painfully evident, but is a quite natural result of the public school training. Such questions as "What should I see?" "What use is it?" indicate this weakness.

(3) The particular claim of these studies in later periods is on the discovery of relations. I am aware that this statement will seem contrary to facts; that this joy of discovery does not exist in many students. True enough, but how can it exist when there is, first of all, no basis for discovery, and second, when the senses have not been exercised systematically for a period of eight or ten years. The effort to arouse it to living activity is more than most teachers have time or patience to do. The very same lack of desire to use the body will result if it is not exercised, and the victim of non-use is ever conscious of his weakness.

(4) Finally, in the discovery of the unity of all nature (Philosophy) the student finds his highest pleasure and profit too. There is not only mental development in a well-arranged course of Nature Study, followed by the Sciences based on it, but there is moral development as well. Lying is as much due to ignorance of truth

as to natural depravity, which is unnatural ignorance. The merchant who deals dishonestly is ignorant of this law of the Universe : "Truth must win ; error must lose," To demonstrate this to a class of High School pupils is quite as possible as to demonstrate a problem in Euclid. Biology, Physics, and Chemistry properly taught are excellent moral studies.

(5) *Practical Advantage of Nature Study.*—Herbert Spencer has shown the value of Sciences in his discussion of the question, "What knowledge is of most worth ?" His arguments seem to me sound. There is, however, a tendency to an extreme view of the value of Science as compared with other studies.

What is the process in Nature Study ? The order of mental activities is as follows .

(1) Recognition of individuals—Perception.

(2) Learning their names uses and chief properties.

(3) Distinction of animate from inanimate things, or more correctly, attention to the former and neglect to the latter.

(4) Likenesses of forms.

(5) Differences.

(6) Grouping objects according to likenesses.

(7) Minute examination, extending to internal structure etc., finally microscopic examination.

(8) Life history—a summary of preceding, omitting unimportant details.

(9) Embryonic development.

(10) Relations to whole kingdom.

This analysis is according to the order of mental activity, progressing from an undefined whole to a defined whole through mental analysis and synthesis. Each step is an advance in the discovery of relationships, ending in an *ideal* state—a knowledge of all relations. The aim of Nature Study is to accomplish what is outlined above, and may be stated in a sentence—to make definite that what was indefinite.

Public School work and early High School work would not spend much, if any time, on Nos. 7 and 9, viz. : internal structure and embryonic development. No. 8 is a constantly enlarging phase. No life history is even complete, for varying conditions will bring about modifications. No. 10 is also a growing subject of study. As mental power develops, new relations will be discovered and old ones modified. The later High

School and the University period will be fertile in the discovery of relations, if the elementary period is profitably employed in developing the elementary powers of mind.

From two to ten years of age the child is occupied in gaining definite knowledge about individual things. He wants to know their names, *their use*, their properties and characteristics. He is interested in an object, so long as there is anything new in it for him, but naturally owing to his limited 'apperceptions' he soon exhausts this interest. He must then leave this object and return to it again when he has developed new power in that direction. His preceptive power continues to develop with increase of mental power. They act and react on each other. I was going to say that a child first distinguishes animate from inanimate things, but it is more correct to say that he notices living things, moving things, noisy things, while he ignores lifeless, motionless, quiet things.

Regarding these living things he first notices *likenesses*. All large four-legged animals are 'dogs'; all moving mechanisms 'toot-toots,' all coins are 'dollars.' Still he begins almost immediately to notice distinctions, but the likenesses come first, and immediately there begins a rudimentary classification. It will probably be increased and unscientific, but so far as his knowledge goes, is justifiable and if he learn as he should learn, that classification is always subject to change he has made a very important discovery. Even the most complete and scientific classification is subject to modification.

Any course should be outlined to accord with these activities:

1. Recognition of individual things; learning their names, uses and chief properties.

The child has been developing these activities from the age of one year till it enters school. It has learned the names of a great many common objects which any one can enumerate. It is the teacher's first duty to extend this knowledge. The child wants to learn the names of more things, new things, and also to learn more about the old familar objects. All that is needed to secure his entire attention is to introduce something strange—either something quite new or something familiar in a new relation. This education should be continuous with his former experience. Too often the child finds no link between his school life and infant freedom. True he learns words, but that is the trouble. It is all words. Words are good, but there should be new objects pictures, etc., new work, weaving, cutting, drawing, modelling (hand expression).

The teacher should see that the child's attention is drawn to the following things, in his first year or two at school—sun, moon, stars, clouds, rain, snow, ice, rainbow, creeks, valleys, hills, trees; learning to recognize at least the common trees growing in the vicinity such as maple, beech, oak, elm, horse-chesnut, walnut, sycamore, pine, cedar, spruce. He should be able to recognize the individual leaves of these, while later on he should study their habitat, soil and light relations, and above all, what they do.

The names of the common flowers should be taught, *e.g.* anemone, buttercup, marsh marigold, Indian turnip, dog's tooth violet, blue weed, toad flax, lily, violet, wild rose, may apple, needless to say that a specimen of the plant should always be before the class. It will be sufficient to call the attention of the class to the color and some marked peculiarity *but anything approaching analytic examination should be avoided.*

In the following years this should be continued so that by the time the 4th grade is reached the pupil should know at sight all our common trees, flowers, and animals, their habits and chief characteristics, so that a fairly good account could be given of each. The information could be obtained *as far as possible from observation* supplemented by books. The inexpensive aids at hand now such as the magazine "Birds and all Nature," "The Butterfly Book," "A Guide to Wild Flowers," "Our Native Trees," the natural interest of children in these and our close daily contact with nature, leave nothing lacking to make a most interesting and profitable study. Instead of leaving school with the remark "Thank goodness! I'm through with that," there will be a perennial interest in the perfect handiwork of nature, which will not only help to pass pleasantly many an otherwise lonely hour, but will make a better all-round man or woman of the pupil.

It is too common to find school duties entirely neglected after school life has ended. What does this mean? Does it mean that our teachers do not know how to teach Arithmetic, History, Grammar? Or does it mean that we are teaching the wrong subjects? Generally speaking it is because there is a divorce of school studies from practical life, and Nature-Study will help to annul that divorce. There is sufficient time in our city schools, at least, for the subject. Less time can be given to Arithmetic, Dictation, Grammar, so-called History and Geography, for all that I have here outlined and more. The more I see of second and third book classes—yes of all classes,

drearily drilling on analysis and parsing, *chief events* (?) in history, names of places and rivers and capes in geography ; the more I try to drill these into a class myself, the more satisfied I am that we are entirely wrong in at least two fundamental things, viz.: *the things to be taught* and *the motive for teaching them.* Much of what we are honestly striving daily to teach is wholly unsuited to the child-mind, and our whole motive is to store up individual facts to be reproduced, unassimilated, at examination day. We eat food and from it build up bone and muscle and sinew. We consider it a pathological physical condition when this food remains undigested and the burdened digestive organ ejects the food as it was received. But in the mental realm, we go happily on, teaching facts, facts, facts (and this is not half bad), but we demand them on examination day just as they were given instead of examining mental power—the ability to think and to act. Even Arithmetic examinations are tests of memory. We want to discover very soon that there is quite as much, if not more, mental training of its kind in the study of Geography, including Nature-Study, as there is in Arithmetic.

The comparison of physical and mental food may not seem quite fair but we shall endeavor to show the exact parallel. When an individual eats food (exactly the same food as any other individual may eat) he rearranges by means of his digestive organs, the elements of this food into something (bone, etc.) entirely individual. Before he ate the food, it might have been anybody's—in fact, it was, one might say, common property. After eating and *assimilating* this food, although it consists of entirely the same elements as before, it is quite individual in its nature. The bone and sinew and muscle are his and his only. The food has been brought into different relations and the result is something new—something different. The very same food eaten by another individual, would have produced quite a different kind of bone, muscle, etc.—different in size, strength, quickness of action, elasticity, etc., and subject only to one individual will. *The food was universal—the product is individual*—mental food should undergo a similar process. A fact is universal—or at least it has a universal side—it may belong to anyone. "The subject matter of knowledge is universal ; that is to say, it is common to all intelligences. What one knows everyone else may know." But when an individual mind has assimilated that fact, it has changed its relations. The individual element of feeling is now associated with it. The mere reproduction of the fact itself—the universal element is of little

consequence, and if nothing more can be produced—and too often, this is the case—it is evidence of a diseased mental state. There has been no assimilation—the fact has really no individual element in it. It has never aroused any feeling and is, in a sense, "coughed up" to use a slang expression, unchanged. That was the sin of the man with one talent "Lo, here thou hast what is thine." A great many of our candidates at Entrance and other examinations might truthfully say the same to the examiner, "Lo, here thou hast what is thine and never was nor ever will be mine. I am rid of it now and hope never to be burdened with it again." Teaching which does not arouse this individual element of feeling is mere cramming and examining that does discover this individual element, is worse than useless. My object in making this apparent diversion is to make clear the teacher's attitude towards Nature-Study. He should aim to develop mental power, to cultivate the individual side of his pupil's natures, not teach mere facts for the sake of facts. There must be facts of course, but we should not be satified when these are known. There is the same difference in teaching for examination and examining the teaching as there is between living to eat and eating to live. We should live to teach not teach to live.

Interest in things around him will arouse feeling and this cultivates mental power. But to resume. After recognition of things, their names, uses, properties, characteristics, and the next step is "distinction of animate from inanimate things." In his early years everything is believed to be alive—a doll is a real, living thing. By the time the school age is reached he has begun to distinguish between living things and dead matter while his interest is all with living things. Accordingly, for the first few years of school life, plants and animals should receive more attention than matter and its properties. The teacher can aid the pupil in discovering the difference between life and not life by judicious questioning. What can a squirrel do that a doll cannot do? Run, eat, chatter, &c. These questions should form the basis of language lessons in the lower grades.

It is particularly important that definitions should be avoided in all these stages of Nature-Study. Not until the age for classification is reached can a child comprehend a definition. A definition must state to what higher class the thing defined belongs, with the specific difference of that thing from all others of that class, *e.g.*, An Island is land surrounded by water. Thing defined—island—class above—

'land,' specific difference "surrounded by water." The next step is comparison. Always bear in mind that children, at first, note resemblances and are apt to apply the same term to a great many different things. Every thing with four legs, which moves, is a dog. A toot-toot is either a train, a street car or a wheelbarrow or his own toy waggon. Differences of size, details of any kind are quite neglected. Even we grown up children note resemblances first, just because we love the familiar rather than the wholly strange.

Rosenkranz's principles of education ought to be known by every teacher. (1) Mind is potential (undeveloped.) (2) There must be estrangement. (3) The strange must be made familiar. "It must estrange itself from itself." "Estrangement removed by discovering laws and relations." It is common experience that strangers will note family resemblances long after those familiar with its members have ceased to perceive them at all.

We must begin, then, with "likenesses." How is the dog like the cat? How is the red squirrel like the chipmunk? No course need be outlined, because everything depends on the teacher and the material available in the vicinity.

This is where the study of plants is particularly advantageous in school work. We can always get material here for comparison and later for classification, much more readily and satisfactorily than in the animal kingdom.

Suppose your class has learned the common names of the buttercup, marsh-marigolds, bloodroot, lily, dog's-tooth violet; select the lily (*Lilium*) for comparison. Their attention perhaps has not been drawn to the number of sepals, petals, etc. You ask them to compare the outer rows of floral leaves in each flower. They find five in one and three in the other, having, of course, first noticed that each flower is moddled in somewhat similar fashion. There are four whorls of floral leaves in each, whose general appearance is the same. Other points of observation should have been noticed first. But comparison will bring out the differences. They should be noticed in somewhat the following order: Difference in number of parts in each floral whorl. *Time of flowering—habitat.* Difference in venation of leaves, arrangement of leaves, arrangement of flowers (inflorescence), fruit.* From such comparisons the child should con-

*There has not been sufficient attention paid to habitat and time of flowering of plants. School children can be interested in making lists of plants that grow in swamps, in water, in damp soil, bogs, in dry soil, in sand, in deep woods, in open woods, by roadsides and lanes, waste places, in loamy soil, in gravelly soil, in land where fire has been. Also they should keep track of the time, grouping plants under each month.

struct his own key to the flowers, instead of being introduced to a conglomerate mystery, such as the manufactured key in the Botany must seem to the child. But this is more advanced work. We have not yet reached classification.

If fortunate in living near a shallow lake margin, it will be easy to observe the groups of plants that grow in the water, at its edge, on the beach, and on the loamy soil about. The plants in each area will be conspicuously different.

It should be borne in mind that our native wild flowers grow in the woods and fields, while imported flowers inhabit the roadsides and waste places around dwellings.

The next step is classification. The child has made the acquaintance of a great many common flowers or animals. He has compared these. In the course of his comparisous he has made notes of differences, which are so marked as to indicate opposite characteristics. He will have such notes as these—The Buttercup, Catchfly, Apple, etc., etc., have veins that divide and redivide forming a network, the parts of the flowers are usually in fives, woody stems show 'rings.' The Lily, Dog's-tooth, Violet, Sagittaria, have veins that do not divide and redivide but run from base to apex, parts of flowers are in 3's or 6's and wood does not show rings but bundles. (It would be useless to call attention to Phanerogams and Cryptogams as yet). Accordingly we have two classes which we may call simply Class I and Class II. (As practically all our public school work would neglect Gymnosperms, except for purposes of mere recognition, the sub-classes Angiosperm and Gymnosperm should not be made in classification here). Having made clear, then, the two classes, you ask your pupils to select from eight to ten specimens, either actually present or fully described and illustrated by them, previously those that belong to Class I, leaving Class II by itself.

Then from an appropriate selection, e. g.: Buttercup, mustard, catnip, morning glory, hepatica, anemone, rose, sweet pea, etc., ask class to place those flowers together which agree in the one particular of petals united or not, or petals absent. Ask pupils if there can be any other division on this basis. Tell them to group these into divisions 1, 2, 3, eventually giving the names polypetalons, gamopetalons, apetalons. Better to err by withholding the technical name too long than by giving it too soon. I have known pupils for Senior Leaving, still stumbling over the terms inferior and superior, just because they had learned the terms first

and the meaning afterwards. Give the idea first, the name afterward. In this way the divisions and sub-divisions under stars, crosses, etc., should be worked out, the pupils making a temporary abridged key. They would then realize the use of classification, seeing that it is the orderly arrangement of their knowledge for purposes of reference and convenience in transmitting it. As ordinarily introduced, the key is an extremely mechanical thing arranged by some one else for our convenience in finding the name of a plant. Classification studied in this way will not be the mechanical process of searching a key for a name, but a living, meaning process, of real educational value.

There is a good deal of classification in Geology, which may be introduced in public school work in fourth classes. It would be better to omit the distinction of vertebrata and invertebrata and take branches as convenience may dictate. The earth-worm is a common abundant type, with sufficiently marked characteristics to be apparent to public school pupils. The crayfish, spiders, millipede, and insects of all kinds are extremely easy to distinguish from all other branches, as are also the clams, snails, slugs. The soft gelatinous bodies of these latter animals are sufficient distinction for elementary work. Finally, the backbone animals : fish, frog, snake, bird, mammal, are types so common as to be known at sight by everybody. The first four need not be sub-divided, but the common types of each should be known. Of fishes : Perch, bass, whitefish, herring, pickerel, can all be obtained ; frogs, toads, salamanders, are abundant. Snakes are too familiar ; birds are everywhere, and mammals are members of our households. It will require no great effort to be able to know these classes at sight. The same method of study should be observed here as in Botany. Compare (1) resemblances, (2) differences, (2) group together.

During all this time, the pupils will be learning, incidentally, as it were, but purposely from the teacher's standpoint, facts about each species, its habits, haunts, food, use, etc., introduced sometimes in an anecdote, or simply told or better *discovered*, for to each one of us the world is as new as America was to Columbus and the Europeans before 1492. In the higher classes all this may be made the subject of a composition, which will be a summary of each pupil's knowledge of the species. It may be given any name but such summary is the life history of the animal or plant under consideration. In time some sort of order should be observed in writing these so

that comparisons can readily be made, but this order may well be sacrificed, at any time, to preserve interest. It may take the form of autobiography as here instanced: "My name is Lily. I live in the rich soil of the shady woods. All winter I lie beneath the snowy drifts but as soon as warm May days come, I quickly push my way into the warm sunshine, spread my three leaves to the air and soon after you will see a beautiful white, pink or red flower nodding in solitary grandeur, on a slender stem. This flower does not last long. Some are plucked and carried away by boys and girls, who love to visit the woods in May, while others die away leaving a three celled seed-box behind."

Just now there could be no end of interest aroused in animals by reading Ernest Seton Thompson's stories of animals or Fraser's "Mooswa of the Boundaries," stories of birds from "Birds and Nature" and dozens of similar works. These are models of life histories in many cases. The life histories of insects such as the cicada, dragon fly, butterfly, bee, mosquito, house fly, are absorbing interest. Even if these cannot be worked out by each individual (and this is manifestly impossible), there will at least be the benefit of interest maintained in animal life. The cocoon of some common moth or butterfly can be obtained and an interest in these and the relation of birds to them is of the greatest practical value. The practical is the useful, the useful is the beautiful. Try it once. Bring to your class the leaf enclosed cocoon, the woolly variety, the little brown jug with convenient handle, turned up in our gardens the goggle-eyed larva of the dragon fly scraped up from the ditches, the wiggling larva of the mosquito, from the rain barrel, the long sleeping seventeen year locust larva, the eggs and larvæ of the destructive Tussock moth, even the repulsive Colorado beetle or the forbidden San José scale, the plant lice with their honey drops which ants and bees know well, the snail with house upon back, the Argus-eyed spider, or the thousand pusmed eye of the common fly, his hairy feet and their use—all these are poems in concrete which at early observed and lovingly studied will give us in time the perfect abstract metrical expression which will be filled with music and meaning. Consider our means of expression and their ideal order as outlined in the beginning of this paper and the relation between Nature study and Poetry will be evident.

This brings me to eighth and lastly,—*simple relations*. Though I stated in my categorical arrangement of mental activities that this

comes last and is particularly applicable to higher classes, I did not mean that the simplest activity of mind is wanting in the power to recognize relations. As soon as a child perceives, he recognizes relations of things—the relation of cup and foods, of stove and heat, of cap and outdoor life—but as perception should be the predominant mental activity in child life, the recognition of and search for relations should characterize the higher mental life. To ask a second class "What is the relation between plants and climate?" would be absurd, but the same or a similar question would be quite appropriate for a fourth class.

As to teaching the relations of things, the teacher may depend a great deal upon the child's own mental activity. He is constantly seeing relations and searching for them, struggling to relate the new to the old—hitching on the new idea to its proper appreceptive system, thus enlarging the system and fixing the fact. This is the secret of good memory. Relate the fact, not drill it in by vain repetitions "as the heathen do," thereby relating the fact to fleeting sound only. Instead of "repeat, repeat and repeat" we should "relate, relate and re-relate" not monotonously and mechanically to the same thing, but so many different things in time, space, causality etc. This is particularly important in Science. Indeed Science consists in the relations of facts, not in the facts themselves. At first, the facts themselves may be considered of greatest importance but these should eventually have importance only as related to each other.

Some of the relations, with which we may expect our public school pupils of the higher grades (fourth and fifth classes) to become familiar, are :—

Animals and plants to climate.

Animals and plants to kind of country. (Plants to soil more particularly.)

Dependence of animals on plants.

Flesh eating animals and herbivorous animals.

Color as a means of protection.

Protective resemblances.

Relation of form of flower to pollination.

Relation of form of seeds to its distribution.

Distribution by animals and by man.

Relation of woods to rainfall; rainfall to vegetation; vegetation to humus; climate to woods; rock to minerals; minerals to com-

merce ; coal and iron to steel works ; plants to marsh, meadow and dry land (each has its distinctive plants) ; leaves to light ; leaf arrangement to light ; fruit to flower ; fruit to light.

Economic importance of animals and plants.

Relation of roots to soil, light, moisture.

Many of these relations may be studied experimentally in the class-room. (See First Lessons on Plants, Atkinson ; "Plant Studies," Coulter.)

EDUCATION IN NOVA SCOTIA.

By INSPECTOR G. CREIGHTON, Halifax.

"Education," says Mr. John Stuart Mill, "includes whatever helps to shape the human being ; to make the individual what he is, or hinder him from being what he is not."

To describe fully Education in Nova Scotia would be to write a complete history of the province, a work which awaits some future historian, so different times and under varying circumstances, from 1605 to the present, have landed upon our shores, French, English, Scottish, Irish and German settlers either direct from Europe or from what are now the New England and Middle Atlantic States. The descendants of these early settlers form by far the larger portion of the present population. There are, in addition to these, quite a number of colored folk—the descendants of slaves from the West Indies and the Southern States of America.

Schools of a more or less private character existed in Halifax and in the more thickly settled portions of the provinces from the first settlement of the country, but up to 1864 whole districts were left without an opportunity being afforded the children of obtaining the barest rudiments of an education.

The first legislative enactment with respect to common schools which had regard to the province as a whole was passed in 1826. Boards of school commissioners were appointed and power was

granted to their boards to examine candidates for license to teach in the respective districts. The sum of £2500 was divided amongst the different boards which was apportioned to the schools largely at the discretion of the boards and in disregard of the regulations governing such distribution. This yearly grant was increased from time to time, but until the passage of the Free School Act it never amounted to more than £11,170. The regulations governing the distribution of the grant were such that if strictly enforced very few sections, even to the present, would have been able to participate therein. The fertile portions of land lying for the most part along the Bay of Fundy from which the early French settlers were expelled in 1755, were occupied by people from New England. The Acadians who remained or who found their way back from exile settled in portions of Digby, Yarmouth, Richmond and Cape Breton Counties, smaller settlements were made in Halifax and several other places in the province. The Germans were settled in what now constitutes the County of Lunenburg, Pictou, Antigonish and the greater part of Cape Breton Island were occupied by Scottish emigrants of whom the majority came from the Highlands. Disbanded soldiers were located in Halifax and various other parts of the province.

When the differences in race, language, social customs, and religion are considered little wonder will be expressed that years of agitation and discussion preceded the adoption of a general system of free non-sectarian schools.

"As early as 1841 Joseph Howe made an attempt to introduce the New England system of free schools supported by assessment. No measure was brought down, but the opinion of the House was tested by an amendment, moved on the existing School Act. Public opinion was not prepared for this important change, and the proposition was negatived by a large majority."

In 1848 the House advocated the establishment of free schools, the appointment of a Superintendent of Education, the establishment of school libraries and the formation of teachers associations. Said Mr. Howe:

"The elevation of our teachers in the general scale of society is a topic to which I feel it my duty to call attention. To pay them efficiently is a first step, but we must give them a pride in their art and enlist their co-operation. We must learn to consult them, to care for, to promote them. I would assemble once a year at least all the teachers of a county in the shire town, and let them discuss tha

subject of education, and report their suggestions and advice for the guidance of the Executive and the Legislature. This would make them acquainted with each other and with each other's modes of teaching ; it would excite an honorable pride and a spirit of generous emulation. And who can doubt that many valuable suggestions would emanate from these meetings ?"

I shall venture to quote further from Mr. Howe's speech to illustrate the state of public feeling in Nova Scotia at this time on Education matters :

"The subject we are called to consider involves the highest interests of the people, and offers the noblest theme for the orator and the statesman. Our population now is estimated at 300,000. Our children number 60,000, not many years hence they will be 120,000. Let us contemplate this numerous race, for whom we are required to legislate, trained, erect, intelligent, self-confident ; multiplying by science the productions of the earth ; indefinitely extending their strength by making the water power of our streams do the work of many millions ; traversing the continent by railroads, the surrounding seas by steam ; transmitting their thoughts over a continent by electric wires ; and diffusing intellectual life and energy over a progressive and happy country. This question, above all others, preeminently demands the consideration, and the united action of the government. The time is not far distant when it will be so regarded, and the measures requisite so matured. But, unfortunately, at the present moment it cannot be wisely dealt with by any party or set of men that aspire to conduct an administration. The passions, the prejudices of the past, have not yet subsided, and union of sentiment, in a population so diversified as ours by contrariety of religious opinion, is not easy of attainment. We have been told that education is henceforward to be the battle-ground of party and that public men are to rise and fall, to be elevated or overthrown, upon this field, which should be dedicated to peace and generous exertion. By God's blessing, this shall never be. The time shall come when, if education is but mentioned here, faction shall be hushed, personal rivalaries forgotten, and ambition shall plume her wing for nobler flights above the mire and strife of party."

This prophecy was literally fulfilled. When Dr. Tupper (now Sir Charles) introduced his Education bill it received the hearty support of the leading members of both political parties; and, although the new method of taxation for the support of schools at first encount-

ered fierce opposition in many parts of the country, the better sense of the people gradually prevailed, and the free school soon came to be regarded as indispensable in nearly every locality.

By the provisions of the Education Act the members of the Executive Council constitute the Council of Public Instruction with power to regulate all educational expenses not provided for in the Act.

The Council appoints a Superintendent of Education, Normal School teachers and Inspectors of schools; grants license to teach and appoints a provincial board of examiners who report upon the written exercises at the council examination of High School pupils. These results are used as evidence of scholarship in the case of applications for license to teach.

The Superintendent for Education exercises general supervision over Inspectors, the Normal School, County Academies, High and Common Schools and other educational institutions receiving provincial aid.

The Superintendent of Education is required to inspect all County Academies and make annually for the information of the legislation a report on the state of the academies and schools subject to his inspection and supervision. He is further required to prepare full statistical tables and detailed accounts of expenditure of money appropriated for public schools and also to collect all available statistics relative to all educational institutions in the province.

Provincial Normal School.

"The Provincial Normal School was established in pursuance of a bill which passed the Legislature of Nova Scotia, on March 31st, 1854. Three years before, a bill having the same purpose in view was, on the recommendation of Dr. (later Sir J. W.) Dawson, introduced into the House of Assembly. It was carried through its earlier stages, but lost on the third reading. Dr. Dawson renewed his recommendation during the session of 1852, but with little success, until, in 1854, the Hon. Samuel Creelman, Financial Secretary, introduced the bill as a Government measure."

"The Act of 1854, provided for the appointment of five Commissioners or Directors who were to choose a site in some central and convenient locality, to erect a building at a cost not exceeding one thousand pounds, and to take the general management of the institution, framing the by-laws and regulations, etc. After some

inquiry on the part of the Commission, Truro was selected as "the most eligible site, being as near the centre of the province as possible, and possessing many of the desirable requisites for the establishment of such an institution."

"On the 14th of November, 1855, the Normal School was formally opened. The enrollment was sixty-four. The principal was Rev. Alexander Forrester, D.D."

"In 1869, Dr. Forrester was succeeded as principal of the Normal School by John B. Calkin, Esq., M.A., who for thirty-one years with unvarying success conducted the institution, retiring from the post in 1900, at the close of the school year."

There are ten inspectorial divisions in Nova Scotia. It is the duty of each Inspector to act as clerk of each district board within his division, and to examine all school returns, and prepare therefrom an abstract for the Superintendent—to apportion the municipal school fund—to keep a correct record of boundaries of school sections —to visit and inspect annually, and oftener when required, each school and county academy within his district and report thereon—to furnish trustees and teachers information respecting the operation of the Education Act—to assist teachers in the classification and conduct of their schools.

[Here follow abstracts comprising the chief regulations respecting Public Instruction, Provision for the establishment of Manual Training, Temperance, Education of the Blind, etc. For further information on these matters see Regulations of Council of Public Instruction.]

The total number of school sections as returned for the year 1900 was 1,875. Of these 132 had no school. In explanation, it may be said that the greater number of these latter are sections only in name. The number of teachers engaged was 2,557, of whom 616 were males and 1,941 females. The number in 1864 was 615 male and 478 female. The total number of registered pupils was 100,129, with an average daily attendance of 56,225, or about 55 per cent. Of this number, 7,249 were reported as doing high school work. The number of Normal trained teachers was 887.

That the schools are largely in charge of females need scarcely be remarked upon. The industrial and other conditions are such that thus for years to come the schools will remain.

The course of study for common schools extends over a period of eight years. The pupils are supposed to enter school at the age

of five. No age limit for the completion of the course is specified. Any person living in a school section can claim school privileges for any period he may see fit to attend. Only in graded schools can the course of study be carried out in its entirety. For common miscellaneous schools it is merely suggestive, and to be followed as closely as circumstances will admit.

The High School course extends over a period of four years. The pupils in the High School are graded on the results of the provincial examination, 50 per cent. of marks on any eight subjects constituting what is known as a High School "pass." For those who intend to qualify as teachers there is an imperative course prescribed, and includes in addition to the regular high school subjects, school management and teaching, school law and hygiene.

While attendance at the Normal School is not compulsory such attendance is necessary in order to qualify for a grade of license of equal rank with the high school certificate held.

Of directions and prescriptions for the guidance of teachers and pupils there is no lack. The "Manual of School Law" is illuminated by 108 pages of "Comments and Regulafions" thereon, day and evening schools abound, departments of Manual Training and Domestic Science will soon be in operation in nearly all the centres of population. In school buildings and equipment and in method of teaching there has been great improvement since the establishment of Free Schools, but in the proper care of the health of our school children, in some respects, we have advanced little beyond the conditions prevailing during the Middle Ages.

We have no office of vital statistics, and as a consequence no very accurate statement can be made, but I believe that the attendance at schools is reduced one-third by the prevalence of epidemics of mumps, measles, whooping cough, etc. Not only is little precaution exercised against the spread of these diseases, but parents oftentimes deliberately expose their children to infection in order that, as it is commonly expressed, "they may have them over with."

ATTENTION IN THE SCHOOL—HOW IT MAY BE SECURED.

By H. S. Bridges, St. John, N.B.

I am somewhat afraid that my intelligent readers, being offered advice on an important subject connected with their profession, may ask for credentials. I must, therefore, say at the outset that my only right to advise others has been obtained from several years of practical experience in the public schools of New Brunswick; but that this right is likewise open to some serious objections. In the first place, my experience has been largely confined to one kind of school; in the second place it was acquired at a time when there was decidedly less interest felt in what may be termed methods of education. The generation of teachers to which I belong entered on their work without having either read or thought much about the peculiar difficulties connected with the art of teaching. We rushed gaily in where experts now fear to tread. Of course we made many mistakes, some of which we tried to correct when discovered, or when pointed out to us by others, while some, doubtless, were only discovered by those who were supposed to profit by our instruction, or by those who were our colleagues in the same profession. Nevertheless, the old maxim, "Nos docet experientia," is as true at the present time as when it was first uttered; and an old teacher who exerts himself to be thoroughly practical may doubtless be able to give some useful hints to those who are engaged in the same calling.

My subject is "Attention, and how to secure it in the schoolroom." The ability to secure attention is, as most teachers know, intimately bound up and connected with the other qualities and ideals of the teacher himself. We may, therefore, at the outset consider those tangible elements of governing power which go to make up the successful teacher, and which lie, for the most part, within the control and cultivation of nearly all. The first of these elements is good scholarship, that is, a thorough and fresh knowledge of the subjects taught. Though most teachers will concede this to be an essential condition of successful instruction, a somewhat extended experience leads me to believe that but few clearly realise how absolutely necessary it is to possess this freshness of knowledge, if they wish to control their classes easily, and secure good attention. As a distinguished writer on education expresses it: Whatever increases the confidence of pupils in the teacher lessens the necessity

of outer control. Confidence is the sure basis of cheerful obedience, the prompt and happy yielding of the pupil's will to the will of the teacher; and hence, as confidence grows, the necessity for outer control lessens; and as confidence lessens, the necessity for outer control increases."

Now, other things being equal, the confidence of a school in a teacher will rise or fall with the thoroughness and freshness of his knowledge of the lessons taught. The reason is plain. The teacher stands before his school mainly in the position of an instructor, and the youngest scholar has intelligence enough to see that the teacher ought to know what he professes to teach. The confidence and esteem of pupils are gained by thorough and accurate knowledge on the part of the teacher; while his ignorance and inaccuracy tend to create distrust and multiply the occasions in which he must exert his authority. Not only does fresh and thorough knowledge on the part of a teacher win the confidence of pupils—it does much more, it awakens interest, holds the attention, and secures diligence in study. The reason is evident. The teacher's interest in the lessons taught awakens the interest of the pupils, their interest secures attention, and attention insures application and progress. Thus a teacher's attainments touch the pupils in all their relations and duties, and in a large measure create the conditions, from which good order results. Many a teacher, who has been considered weak in government, has yet controlled large classes by the clearness, accuracy, and fullness of his instruction; indeed, I am fully persuaded that more teachers fail to secure the attention of their pupils from want of accuracy and freshness of knowledge than from any other single cause. There can be no reasonable doubt that good scholarship is of very great assistance in winning the confidence and holding the attention of the class.

We are thus led to see the importance of daily study as a means of growth in governing power and influence, for I hold that daily preparation is absolutely necessary, if a teacher wishes to be really successful in his work. In fact the power to awaken interest and hold the attention of the class is due quite as much to the freshness of the teacher's knowledge as to its fullness. Now, freshness of knowledge can only be secured by daily preparation, and no lesson is so simple as to make such preparation unnecessary. Even the reading lessons in a primer require some attention as a condition of the best possible instruction. Let the teacher review a lesson before

teaching it, and he will find new facts and new relations disclosed, a fresh interest will be awakened, his memory made more ready and accurate, and his ability to instruct and hold the attention of the class immeasurably increased. Moreover, a lesson carefully prepared can be taught in much less time than is possible without such preparation—a fact which every teacher will admit—and those who make such preparation will be fully repaid in the increased interest and application of their pupils; in their attention and ready obedience. Let me here quote the words of Dr. Fitch, so suggestive and so full of practical wisdom : "However simple the subject of a lesson, it is never so good when unpremeditated as it would be with a little prearrangement and fore-thought. It is only by such preparation that you can determine how much can fairly be attempted in the prescribed time, what is the order in which the parts should be taken up, how they shonld cohere, at what point you should recapitulate, and how you can give unity and point to the general impression you desire to leave." It is said that Dr. Arnold, of Rugby, was once asked why he spent several hours daily in his study preparing lessons which he had taught for years, and that his answer was : "I wish my boys to drink from a running stream, and not from a stagnant pool." Does not such an answer show the clearest insight into the conditions of all true teaching, more especially that which lays hold of the very heart and life of the pupil?

In the second place, a teacher, to secure the attention of his pupils must exert himself to keep both his senses and his sympathies active. It has often seemed to me that more teachers fail from what is mere indolence than from any real incapacity. It saves a teacher trouble, up to a certain point, not to notice slight disorder, and when that point is passed, as it soon will be, one class of teachers seem to think that it saves trouble to allow more serious disorder, while another class will come down too sharply and severely on the offenders. Need I say that the results in both cases are bad, and might have been avoided if the senses and sympathy of the teacher had been really awake. The teacher must always be on the alert to see and hear what is being done. Where this is the case the pupils soon become aware of the fact, and will for the most part require but little open repression. Far better, however, is it to make inattention difficult by turning the desire for amusement into legitimate channels, which is easily done by providing interest and liveliness in the lesson itself. Now, a lesson should be conducted

with as much pleasantness and friendliness of talk as is compatible with getting the work done. That teacher who is possessed of true dignity can be familiar with his scholars without any danger of their being familiar with him, and he will often find that an illustration, a story, an allusion, or even a jest may prove a fertile seed where his direct teaching may have produced but poor results.

Another element which the teacher must possess in order to secure attention is will power. By this I mean his ability "to keep first, himself and then his pupils right up, day after day, to uniform conduct and effort." This evenness of control not only secures attention and wins confidence, but it also establishes those right habits that are so essential to the well governed school. Now habit is both the "secret and the condition of self-control and self-direction," and you will find it just as easy for pupils to sit together in the class without whispering, as to whisper continually, provided that they have once formed a habit of sitting together without whispering. How then can such habits be formed? Not, we may be sure, by a single effort, or by a series of fitful efforts, but by repeated and continuous activity. How many persons have admired the skilful movements of a company of soldiers without ever thinking of the many hours of persistent drill that have produced such precision and uniformity. Yet this is the real secret of the quiet self-control and easy movement which prevail in every thoroughly trained school, for these do not result from spasms of order or the efforts of a single day. Habit and habit alone will enable pupils to rise quietly and promptly, to stand properly during recitation, to speak clearly and naturally, to refrain from whispering—in short, to do whatever is essential to a well regulated school. Let the pupils then, from the first day, be held evenly and firmly to their duty and you may rest assured that right habits will be formed, and right action become easy. There is an important fact which needs particular emphasis just here, and it is that—"the will of the teacher has most power in school government, when it is accompanied by a silent tongue." Nothing is more useless and ineffectual than scolding or fault finding in school. It is not what you say of a pupil's conduct that tells, but what you require him to do. The following illustration will serve to make my meaning clear. The pupils in a class rise carelessly and stand up to recite in a slouching attitude. Do you mend matters by scolding or finding fault with them? Surely, it is much better quietly and promptly to correct the careless rising by request-

ing the pupils to take their seats and then rise again and to repeat the operation, if this be necessary. And is it not much better to do this by a motion of the hand than by a storm of words?

The next element a teacher should possess in order to secure proper attention is good eyes and ears—by this I mean the ability to know what pupils are doing without actually watching them. In my opinion quickness both of eye and ear is an absolutely indispensable qualification in a teacher. A class ought to sit or stand compactly under the teacher's eye, so that every member can be taken in at a glance and every act and movement instantly observed. Experience fully attests the value of good eyesight and hearing in securing proper attention in the schoolroom. The eye has not only power to restrain, but also to inspire the wayward pupil. If pupils know that every deviation from rule, every wandering look, every careless piece of work is sure to be detected by his teacher's observant eye, they will soon cease to give him much to detect. On the other hand, there is no one defect in a teacher that is sure to be attended with more or less disorder than defective sight or hearing. Even well disposed pupils may almost unconsciously take advantage of such a weakness, while the ill-disposed may be tempted to actual misconduct. This defect, however, may not always be physical. More frequently it is due to the habit of not attending to what is actually occuring in one's presence. In some schools I have seen pupils pass notes right under the teacher's eye, cut the desk, read novels, even play games or prepare the next lesson, yet the teacher did not appear to notice what was taking place. He was absorbed in the lesson, and saw and heard but little else; in short he was teaching them inattention by being inattentive to them. Nothing ought to escape a teacher that the pupils do, for he is there for the express purpose of training them in what they should do. Instant, watchful and, if need be, pitiless repression of the first sign of inattention is the only law of discipline. And, I may add that culpable inattention in the pupils is above all things a teacher's fault. Able earnest teachers, who attend to their class will always find their class attend to them.

Inexperienced teachers, however, often fail to secure the attention of their class from simple disregard of the physical conditions under which their pupils work. There are certain external arrangements which are wholly in the hands of the teacher, and which do not depend upon such circumstances as the structure, ventilation, lighting, and furniture of the room. The neglect of some seemingly

trifling precautions often prevents that steady application and continuous effort which are so essential to the success of a lesson. To secure effectual control, the teacher must take a position from which he can command every pupil. To this rule there are and should be no exceptions. It is often the practice of a teacher to place inattentive pupils in the front seats, and yet to find the teacher himself standing so close to the desk that these scholars are completely overlooked. They are neither made to take a part in developing the lesson, nor do they have a proper proportion of testing questions put to them. Again, some teachers during an oral lesson, form their pupils into a compact body and crowd them too closely together. The class is thus very seriously affected by the absence of the outward conditions of order; for the course of the lesson is often interrupted, and the attention of the pupils distracted by frequent directions about discipline, which would not have been the case had the teacher taken the precaution to arrange his pupils properly. On the other hand, the class must not be spread over so wide an area that the voice of the teacher is needlessly tried, and the work of supervision made too difficult. Nor should we overlook the fact that a proper attitude has much to do with the character of a pupil's attention. Attitude not only makes false work. but it also betrays false work. A competent judge can tell at once by simply looking through the window of a school-room where a class is at work, whether the teacher is doing good work or not; the attitude of the pupils is an unmistakeable sign. The lolling and slouching attitudes into which children so readily fall, are quite as much the cause as the indication of mental indolence. Pupils should never be allowed to balance themselves against the desk during recitation, nor should boys be permitted to construe their lesson with one hand in their pocket. In some lessons, for example, reading and writing, the position which the pupil assumes becomes a question of vital importance, not only for the sake of health, bnt also for successful work. Need I add that lazy and undesirable postures are most likely to prevail in the more advanced grades of a school, and are there very difficult to deal with; yet, the teacher who resolutely sets himself to overcome this fault will be amply repaid by the resulting intellectual alertness.

We shall now pass on to consider briefly the part that skilful questioning plays in securing the attention of a class. Every teacher should do his utmost to acquire the ability to question a class skil-

fully, for it is without doubt the most valuable of the teacher's gifts next to the capacity for government. Descriptive power, skill in illustration, as well as the ability to select and arrange facts—these all have to yield the palm to skilful questioning in teaching the young. No teaching can be thoroughly successful unless there is intimate personal communication between teacher and pupil, and the teacher keeps in touch with his class by means of his questions. Too many teachers assume that a lesson has been received, when they have given it. No greater mistake can be made. A teacher should remember that there, roughly speaking, three kinds of pupils in every class, the bright and thoughtful, those of average ability, and the dull and listless. Let him therefore manage his questioning so that all are kept on the alert. During the development of a lesson the most difficult questions should fall to the lot of the brightest pupils; those of less difficulty to the average scholars; while the idle and indifferent should receive most attention when the lesson is being revised. Dr. Fitch gives the following directions for questioning, and I am sure many will find them useful:—"Fasten your eye on the worst scholar in your class, and be sure to carry him with you; and measure your progress by what you can do with him. Or, notice the pupils who fail oftenest, and bring them into the desks nearest you, and take care that they have twice as many questions as anyone else." And, further, it is quite as important for a teacher to watch the answers of his pupils as it is for him to be able to question skilfully. Always refuse to accept badly worded replies, and let your correction of the error be clear and unmistakable. It is also well to invite the criticism of the class, when a pupil has given a badly worded reply, for in this way better attention is secured and all are kept more alert. Never allow a pupil to hint at a reply, to jerk out a few words and leave the rest to the imagination. I would also make it a rule that every answer should be a complete sentenee—more especially in the lower grades. Some may object to this as being too tedious a process and taking up too much time; but experience fully shows that no middle course is safe. Indeed, it is a most valuable exercise in itself for the pupil to be required to find the right words, put them in the right order, and utter them clearly and distinctly. Many other advantages also follow from this practice. Let the teacher do what he may, there are sure to be some cases of inattention in every lesson; and the pupil who has failed to catch the question can get no good from

listening to an incomplete answer. If, however, he hears a complete sentence, he is sure to learn something. Again, you will rarely notice indistinctness in answering, where pupils have been trained to make every answer a complete sentence.

Finally if the teacher wishes to secure the attention of his class, he must not keep the pupil's mind too long upon the same subject, for the attention may be forced, but without profit to the taught. The time-table should be drawn up in such a way that there are proper changes of work, and the lighter lessons should succeed the heavier. In nearly all the grades it would be well to have a few moments of physical drill follow heavy lessons like Geometry, Grammar, Arithmetic, etc. The length of the lesson should vary with the age of the pupil, and with the subject taught. In the younger classes the rule should be brief lessons followed by singing or physical drill. In advanced classes forty to forty-five minutes is a safe length to adopt. There are, doubtless, some teachers who can retain the attention of their classes for fifty minutes or even an hour, but they are the exception and not the rule. Dr. Thring has made some interesting remarks in reference to this subject which I shall venture to quote. "Most people," he says, "hear sermons." "A unanimous verdict will be given that the mind wanders occasionally even during good sermons, eyelids have been known to droop, yea there have been seen gracious men asleep, whose general appearance scarcely betokened that ill health or exhaustion were the irresistible causes of their slumber. There have been dull sermons and will be again; but it is worth considering that the dullest sermon ever preached is as the blast of a trumpet compared with misunderstood lessons to a heavy ignorant boy, who has no belief in education, no knowledge of its aims, or value, and is only alive to the fact that he knows nothing, and hates it all.

READING IN ELEMENTARY SCHOOLS.

By J. F. WHITE, Inspector Separate Schools, Toronto.

In bringing before this Association the subject of Reading in Elementary Schools I purpose not so much to discuss mere methods, but rather to present certain phases of the question which appear to be commonly overlooked, and to offer some suggestions tending towards improvement.

One of the most noticeable changes in our schools in recent years is the general tendency to lay greater stress on the teaching of English, and to dethrone Mathematics from the proud position, so long held, as incomparably the most important of the school studies. In this elevation of English much prominence has naturally been given to Reading, which educationists rightly regard as the most essential and profitable secular subject in the elementary school. On this point Landon says: "The ability to read attentively and intelligently is by far the most widely useful and important of all the instruments put into the hands of the child." And Carlyle writes: "If we think of it, all that the University or final highest school can do for us is still but what the first school began doing—teach us *to read.*" But reading in this sense does not imply a mere oral drill in pronunciation with the class lying in wait to detect mistakes and the teacher noting the skipping of commas and insisting on the proper holding of the book. To read means rather the ability to grasp the thought from the printed page so as to make it our own.

Considering the great importance of the subject we might fairly expect to find teachers pretty well of one mind as to what Reading really means, and agreed as to the best means of teaching it, with the result of making it the most popular and successful of the school studies. But what is the testimony of competent authorities? Speaking of England, Landon says: "Of all the elementary subjects of school instruction Reading is, on the whole, the worst taught." Inspector Seath places a high value on this subject and he has had exceptional opportunities for judging the results attained in the schools of this Province. He reports as follows about 2,542 children lately admitted into the High Schools. In the examination that he made "merely distinct articulation and fair expression" were looked for. "But 14 per cent. were good, 33 per cent. fair, 41 per cent. poor, and 12 per cent. bad. The 41 per cent. I ranked as poor might

just as well have been ranked in the lowest grade, but I thought it well to reserve the 4th grade for those that were atrociously bad." From his experience he concludes that "there is much room for improvement in the Public Schools of this Province," a conclusion that will be fully accepted by all who are familiar with the present conditions.

The chief causes of failure to attain better results in Reading may be grouped under three heads:

I. The teacher's lack of capability and of preparation.

II. The inadequate supply of suitable reading matter.

III. The comparatively low standard exacted in the schools and at qualifying examinations.

The defects under this last head are those which can most easily be remedied, as no outlay of money is involved, and no long period of waiting required. When, in our examination programmes, Arithmetic is valued at 200 and Reading but at 50 marks, it is clearly evident that teachers will devote much more time and effort to the subject with the highest marks attached, and that Reading will receive but scant attention. It must be acknowledged, too, that many Boards of Examiners are very generous in marking candidates in Reading, ranking few of them below 50 per cent. Surely this is not the way to impress teachers-in-training with the great importance of the subject and the necessity of their careful preparation to teach it properly.

In the school-room a better test might commonly be applied and a higher standard exacted. While few Inspectors or Examiners would accept, as a sufficient evidence of good scholarship, the working of arithmetical examples on which it was known that the pupils had been coached, yet in this subject how many demand tests of ability other than the rendering of selections from the text-book, some of which are so familiar as to be known by heart? To my mind it would be a much fairer test to require pupils, at least those in grades above the lowest, to read new selections either at sight or after short preparation, provided always that such selections are well within their reach. For, assuredly, ability to read implies much more than the rendering of a few chosen pieces on which the pupil has been drilled. If all those connected officially or unofficially with the oversight of schools would assume a more critical attitude in regard to this subject and persistently demand a higher standard it would soon result in a much needed improvement.

The defects under the other two heads will be dealt with to some extent as the subject is discussed. And first let us look at the conditions in the lowest grades.

The child's first step in reading is to make the right association between the printed symbol and its related sound. Most teachers now employ the phonic method, though often in connection with the word or the sentence method. It seems evident, however, that the progress of the average child is not so rapid or so sure as might reasonably be expected. It is said that in schools in France children are able after three or four months to give readily and correctly the sounds of all the words in their first primer. Though the English language presents greater difficulties in phonic teaching, yet it is not unreasonable to expect that, after a training of twelve or fifteen months, the child should know the symbols for the two or three hundred words of the lowest primer.

Let us briefly consider what he has already accomplished without any set teaching before he comes to school at six years of age. He has a fairly complete control of his vocal organs, so that he is able not only to utter all the sounds of his mother tongue, but, as well, to express his thoughts and feelings usually with a degree of nicety in his voice modulations. His ear has been so trained that generally he appreciates justly the delicate shades of meaning conveyed in the speech of others. He has more or less mastery of a vocabulary of say 1,000 to 2,000 words. He brings some knowledge of and interest in a variety of subjects, with usually a keen thirst for further knowledge. Is it then too much to expect that under organized and efficient teaching, and with ever-developing powers, he should within two years master the first and easiest step in reading, viz., to connect the printed symbol with the sound of a few hundred words of his own vocabulary?

What is the cause of the common failure in this respect? In general it is inefficient training. As the very basis of the phonic system is the connection of the printed sign with the proper sound, one essential requirement is that the teacher shall be as familiar with the sounds to be taught as with their symbols. Yet in practice very many teachers fail both in detecting the mistakes of the pupils and in giving them correctly the sounds for imitation. And this radical defect renders comparatively worthless many lessons in phonic reading. Reform in this should start with the teacher. He should be trained sufficiently in phonetics not only to give all the sounds of

English in their purity but as well to know the physiological basis of speech. Then he will be able to teach his pupils not only by imitation but also by directing them as to the right position and use of the organs of voice. Needless to say that the benefits of such teaching would be felt in all the grades. How much valuable time is lost in correcting individual pupils on the mispronunciation of isolated words, when the defect is more radical, affecting a whole class of words with the same sounds, and can be best cured by phonetic training for the whole class. The study of elementary phonetics might well be made a part of the teacher's professional course, for it is of little service to show a person how to use certain tools unless he has these tools to use.

To me it appears evident that the best way for a child to learn the sounds of his mother-tongue, is either by a simple analysis of his own spoken words, or by the imitation of another's sounds. Yet it is not uncommon to hear a teacher request a young child to give the sound made by a sheep, a locomotive, an angry kitten, or (as our book advises,) by red hot iron plunged into water. Almost as illogical are the remote and fanciful resemblances mentioned in teaching the forms of the letters. What is gained by saying that "p" is like a man going up hill with a load on his back? Unless the comparison is both striking and familiar to the pupils it had best not be made. Neither the sounds nor the letters are difficult, and they are quickly learned with proper teaching.

Probably one of the weakest points in the lowest grades is the lack of thorough drill in mere word-naming. The connection between the symbol and the sound must be made not only certain, but, as well, rapid and automatic. The drill to effect this should be, not so much on the sounds of detached letters, but rather when these letters are combined into syllables and words. This drill should be for the ear as well as for the eye—should train the child to give the right letters for the sounds, as well as the right sounds for the letters. Nor should the drill be confined to the comparatively few words found in the first books, but it should be extended over as wide a range as possible. The best results in sure and prompt word-recognition follow from rapid practice on long lists of words, many of them new, written on charts or on the board. What is sought is not the correct naming of a few words, but rather the power to determine the sounds of letters in any combination, and gradually to make word-recognition automatic. This mechanical aptitude to

pronounce words is, of course, not reading, but merely a preparation for it, and should be kept as a distinct exercise. Yet, the earlier and more thoroughly this mechanical facility is acquired, the more rapid and pleasant will be the progress in real reading.

This lack of voice and ear-training has a still wider effect. It is a general and too well grounded complaint that a large proportion of pupils in all grades of our schools are careless or even slovenly in pronunciation. It is of course well understood this is in part an inherited tendency, an illustration of the general principle of Ease, which strongly influences all living languages. But it is an important duty of the school to keep this within due bounds, and prevent marked corruption of speech. His home and his companions have had most to do in fashioning the speech of the child, and the results are often evident in defective enunciation and bad articulation. But all such mistakes should grate unpleasantly upon the sensitive ear of a properly trained teacher, who should not only supply a correct model for imitation, but should, by systematic teaching and persistent drill, conscientiously endeavor to reform these grave faults.

In this, as in other subjects, one of the surest aids to rapid progress is to arouse in the children a strong desire, and induce a conscious motive, that they may know their power and feel the keen pleasure derived from doing their "level best." It is one of the principles of teaching that the pupils should know not only the purpose of the work in general but, as well, the chief aims of each lesson in particular. Now, far too many of the school exercises are purposeless and joyless to the young learner, who stumbles along a dark path, leading he knows not whither. Listen to the early experience of the eminent geologist, Hugh Miller, so charmingly told in his "Schools and Schoolmasters":—

"I was sent to a dame's school, where I was taught to pronounce my letters to such an effect in the old Scottish mode, that still, when I attempt spelling a word aloud, which is not often—for I find the process a perilous one—the *aa's*, and *ee's*, and *uh's*, and *rau's* return upon me, and I have to translate them, with no little hesitation, into the more modish sounds. A knowledge of the letters themselves I had already acquired by studying the sign-posts of the place, rare works of art that excited my utmost admiration, with jugs and glasses, and bottles, and ships, and loaves of bread upon them; all of which could, as the artist intended, be actually recog-

nized. During my sixth year I spelt my way through the Shorter Catechism, the Proverbs, and the New Testament, and then entered upon the highest form, as a member of the Bible Class ; but all the while the process of acquiring learning had been a dark one, which I slowly mastered, in humble confidence of the awful wisdom of the school-mistress, not knowing whither it tended—when at once my mind awoke to the meaning of that most delighful of all narratives, the story of Joseph. Was there ever such a discovery made before ! I actually found out for myself that the art of reading is the art of finding stories in books, and from that moment reading became one of the most delightful of my amusements. I began by getting into a corner at the dismissal of school, and there conning over to myself the new-found story of Joseph ; nor did one perusal serve. The other Scripture stories followed, in especial, the story of Sampson and the Philistines, of David and Goliath, of the Prophets Elijah and Elisha. After that came the New Testament stories and parables. Assisted by my uncles I began to collect a library in a box of birch-bark about nine inches square, which I found quite large enough to contain a great many immortal books— "Jack the Giant-killer," "Jack and the Bean-stalk." "The Yellow Dwarf," "Blue Beard," "Sinbad the Sailor," "Aladdin and the Wonderful Lamp," with several others of resembling character. . . . . From my rudimental books I passed on, without being conscious of a break or line of division, to books on which the learned are content to write commentaries and dissertations, but which I found to be quite as nice children's books as any of the others. Old Homer wrote admirably for little folk, especially in the Odyssey. Next came the Illiad. With what power and at how early an age genius impresses ! I saw, even at this immature period, that no writer could cast a javelin with half the force of Homer. The missiles went whizzing athwart his pages, and I could see the momentary gleam of the steel, ere it buried itself deep in brass and bull-hide."

Should not the school endeavor to make such pleasant experiences the lot of more of its pupils, so that they may learn of the delightful treasures to be found in books and reading? But how can this desire to read be aroused in the child's mind ? First, the home should do its part. At the fireside, long before school life begins, he should have heard true stories, fairy tales, sweet songs, and musical poems, and then he will learn to love and crave for them.

How often is heard the plea, "Tell me a story," "Read to me," showing the child's strong desire, and a real need that should be gratified. If, unfortunately, this practice has been neglected in the home there is all the stronger reason why it should be attended to in the school. The primary teacher should be familiar with the books best suited to the child's needs and tastes, and should see that from the earliest school days the pupils are brought under the influence of literature that will make them wiser and better. For the youngest classes it is usually preferable to tell the story rather than to read it, for the telling of it gives an added element of life and reality.

What should we read or tell to our pupils? First, only what is *good*. There exists such an abundance of excellent literature that it is a deplorable waste of time and effort to use what is poor or perhaps worthless. Second, what *we* like. The story or poem that we enjoy, that has entered into our life, we can interpret to the children. But that which has aroused no responsive chord within ourselves we cannot give to them, because it is not ours to give. "The teacher who would guide her pupils in the field of literature must herself frequent the paths she desires their feet to tread." Lastly, we should give the pupils what *they* like. What we prefer may not always appeal to our pupils; what has interested one class may not please another. We should be guided largely by the criticism of the children as shown in their eagerness or their listlessness, their comments or their silence. Thus we shall discover where their preferences lie and may make our choice accordingly. Not unfrequently the mistake is made of underestimating the tastes and capacities of children. Others besides Hugh Miller have discovered in the Illiad and the Odyssey but an easy and delightful step from their fairy stories. Often they experience great pleasure in listening to what we might hastily judge to be much beyond them, and this enjoyment is a not unimportant factor in their education. "Give them not only the thought which fits the childish experience, but also the treasure which grows in beauty as they grow, and becomes rich as they become wise."

Let me quote from an essay by Agnes Repplier, who has compiled an excellent book of poetry for children. "The most interesting experiment I have ever seen tried to test the natural bent of young and ignorant children towards what is really beautiful in English poetry was the work of a young teacher in one of the public

schools in a great western city. Her class was composed of little boys and girls from six to eight years of age, well fed and well clad, but with no knowledge of anything beyond the city streets. They were the children of artisans who earned good wages, but were themselves wholly uneducated, many of the mothers having but an imperfect acquaintance with the alphabet. The young teacher conceived the idea of reading to these tiny pupils a little good poetry day by day, to see if they took any pleasure in literature which was apparently far beyond their infant grasp. With admirable tact and discretion she selected musical poems, of which the very words might prove seductive to baby ears, and she read the same verses over and over again, so that the listeners might become familiar with the sound, if not with the sense thereof. As her idea was to test the children's enjoyment of poetry, she avoided as far as possible, ballads and tales in verse, lest the delight of hearing a story should be keener than the delight of listening to rhythm; and she essayed very little explanation of what she read, leaving the alert young minds to puzzle out the meaning for themselves.

"Now what was the result of this simple and sane experiment? In a few weeks the restless ranks of the tired and fidgety little scholars began to listen with rapt attention to their favorite poems, and, as they were generally permitted to select the reading of part of it for themselves, their teacher learned just what she desired to know,—who were the chosen poets of their childish hearts. First and foremost on the list, called for oftener than any other verse, was Tennyson's "The Brook," and baby lips were heard repeating softly the enchanting refrain,

> "For men may come and men may go,
> But I go on for-ever."

Next in order was the beautiful "Bugle Song," with its clear delusive echoes, its elfin music sweetly blown through the air. After these came a host of spirited and charming poems, among which ranked high "The Pied Piper of Hamelin," one of the few stories allowed, and all good verses about birds and beasts. Some selections from "Hiawatha" were tried without success. Wandering eyes and listless attitudes betrayed a lack of interest in the Indian epic, and it was dropped from the lists.

"It is through his enjoyment only that a child can be taught the power and the value of poetry. It is by the path of pleasure that this ennobling and illuminating influence enters his young heart.

And the influence to be far-reaching must be unconscious and sincere."

Having by his reading aroused the desire, and in part gratified the appetite of the children for this new-found enjoyment, what more natural than for the teacher to stop at an interesting point in some delightful story and say to his pupils : "I can't finish the story just now." How glad I should be if *you* could read, then you could take the book and finish the story for yourselves. Won't you do your best so that you may soon be able to read charming stories like these ?" Such early glimpses of an enjoyable goal which can be reached by somewhat pleasant paths will give meaning and motive to exercises that otherwise are often dull and unintelligible.

This reading by the teacher should continue during the whole of the elementary school course. It follows that teachers should be good readers, and this implies a higher degree of literary culture and sympathetic feeling than the average teacher now possesses. Besides all this a judicious training of the voice is needed, in both the academic and professional courses, not indeed to produce elocutionists, but rather to develop the power to express with right intelligence and feeling, the thoughts and emotions of others—an accomplishment that is all too rare.

Good reading by the teacher should serve two purposes. First, it will give pupils some idea of what they should strive to reach in their own oral reading, they will have a standard by which to measure their own work. This purpose will be the better served when the teacher reads outside the text-book, for then pupils will not be encouraged to think that they must merely imitate the teacher's rendering, rather than express clearly and naturally their own conception of the selection.

The second and higher purpose is that the teacher's reading should be so directed as to widen the child's mental horizon and develop his character along good lines. As the great object of the school is education rather than mere instruction, the teacher should persistently endeavor to arouse in the child generous impulses and lofty aspirations, and particularly so if other influences have failed to set before him worthy motives and high ideals. Instances of moral courage, noble heroism, brave and generous deeds or endeavors can all be brought before the child in an attractive light and must give some impulses for good. "The highest office of reading is not to open the eyes of the child to the evolutions of the material world.

It is that he may the better understand soul motives and heart needs; that he may live out of and away from his meaner self; that he may relish the homely side of life and weave beauty into its poverty and ugly hardships; that he may add to his own strength and wisdom the strength and the wisdom of past ages."

Perhaps quite as important as the question of *how* he shall read is that of *what* tne child shall read. In the lowest grades he should never be expected to read anything that he would not readily understand if it were read aloud to him. The lesson should be attractive as to subject and style, the books well illustrated and the material abundant,—there can scarcely be too much. It must be evident that, judged by these requirements, many of our reading books are open to rather severe criticism. Just imagine the eagerness of the young learner to follow up stories of such breathless interest as these, taken from books now in use: "The men in the gig see the fox. The fox is by an ox. The ox is by a pig. It is my pig." Rob has his old cob or nag in a cab. He and Mab will go out in it to see a pet cub that Rob has in a lot not far off." How clear to their young minds are such expressions as "a sad wag," "get in a tiff"! It would appear that in providing such bald and empty reading for young pupils the compilers of these books proceed on a wrong assumption. Surely the shortness of a word is not the only measure of its suitability for the lowest readers. Is it not much easier for the child to distinguish such words as "Harry," "boat," "apple," "candy," etc., rather than "hat," "mat," "rat," etc., which by their uniform length and like letters are more confusing to the young learner? It is thus evident that the mechanical part is not made easy by selecting lessons whose chief requirement is that no word shall be of more than three letters. And if the child has had good stories and poems read to him what must he think of those he meets in his first books? I am glad to notice in some recent series published in the United States a decided improvement in this respect. Those of you who are familiar with the "Heart of Oak" series will probably agree with me that their subject matter has been wisely chosen. The books used in our Canadian schools should be so compiled that from the lowest to the highest every selection shall be attractive to the child in literary form as well as in subject.

It would seem to be a right principle that the marked tastes and inclinations of the children should be to some extent a guide to the compliers of such books. Some few years ago about two thousand

children in Indiana were asked to state, (1) What subjects in the previous year's reader they remembered, (2) Which lesson they liked the best, with reasons for the preference. It appeared that 17 per cent. of the lessons were remembered by no one, and that 28 per cent. of the lessons were recalled by but 5 per cent. of pupils. The lessons not remembered by anyone were either those too short to excite interest, or those that treat of matters which a child does not appreciate. The merely instructive lesson, the *preaching* lesson, poems on abstract themes, as "duty," and the moral fable had made but slight impression. In the matter of preference, it appeared that the taste for poetry begins in childhood with the love of rhythm, and gradually passes over in adolescence into sentiment and thought. A decided preference for poetry appeared in the fifth grade, especially among girls, and such poems as "Evangeline," "Thanatopsis," "Snow-Bound" were frequently mentioned. It was evident, also, that children liked those lessons which *suggested* a moral truth, described an heroic action, or a bit of real life. The heroic or daring deeds had a special attraction for boys, while girls preferred those relating to home life, and particularly when written about girls. And all who have observed children's tastes agree that by far the chief literary interest of young children centres in fairy and folk-lore stories, until at least the age of ten, when it rapidly declines. "Their preferences show that children demand a text-book containing selection complete in themselves, simple and charming in style, dealing with thoughts and emotions common to childhood." Generally it appears to have been thought that reading books are not intended to please children, but only to teach them to read and furnish them with information on many subjects. But in recent years a new principle is being applied, and the suitability of the thought and the attractiveness of its presentation are made tests in the selection of lessons. We should ask children to read what best suits their age, tastes and understanding. It is not a question of learning to pronounce words, but of learning to understand and appreciate what is most worthy of their attention. Reading is not droning over empty words and phrases, but it is rather the development of the best feelings and intelligence of the children. They will learn to read fluently and with proper expression what they understand and appreciate.

Besides the wiser choice of suitable material there are other directions in which our school readers might be greatly improved.

The quantity of reading material is quite inadequate. The two primers of the Public School series of this Province give, for an average of three years' work, about 70 pages of solid reading matter, the second reader about 140 solid pages, the third about 240 pages and the fourth 300 pages,—in all about 750 pages or an average of less than 100 pages a year if a pupil completes his course in eight years. How can a child be expected to thrive properly on such a meagre intellectual diet, even if all were of the best quality? The results are that some children read better with the book closed, as they know the lessons by heart; but many fail when tested on unfamiliar lessons of no greater difficulty than those in their reader. Pupils who leave school at the end of the third form would have gone over but 450 pages,—far too little to afford a proper drill on the mere mechanics of reading, not to speak of acquiring a taste for good books.

The remedy seems to lie in providing plenty of good supplementary reading. The English code requires at least two series of readers, while many urban schools in the United States are furnished with from two to ten sets of such books. One school that I visited there had a printing press, which was used to good advantage in providing suitable material, especially for the lower grades. With abundance of books the teachers would be able to "skip" many lessons which, either from the nature of the subject or from its treatment, may not be well suited to the class. At present the rule is to teach every lesson and generally in the exact order of the book. Neither of these practices is wise.

The golden opportunity to cultivate the taste for reading and to direct it into proper channels is afforded in the elementary schools. It has been found that commonly the desire to read becomes strong about 8 years of age, increases steadily to 10, then rapidly from 11 to 14, culminating about 15, after which it often declines. The home, the school and the public library, working in harmony, should be able to provide for the childs need in this matter. Lists of the best books for the several grades should be compiled, arranged perhaps under heads showing those best suited for class reading, for home or silent reading, for information, for boys, for girls, etc., etc. "Every school should have its own little collection of choice books adopted to the stage of development of the children, and in the periods of leisure before school, after school, at the rainy day recess, or in the

leisure moments of finished lessons, the children should be allowed to use these books freely."

As Charles Dudley Warner has truly said, the person who has learned *how* to read but not *what* to read, is placed in a position of great danger. Yet this is exactly what happens to most of the boys and girls who remain at school long enough to master the simpler steps of reading. It is not enough that the High Schools have libraries and supplementary reading, and endeavor to have their pupils know and love good literature. Only a small proportion of the children reach the High Schools, at an average age of about 14 years, whereas the most suitable time for making a good impression in this matter is shown to be while the child is yet in the elementary school.

But the school alone is not to bear full responsibility. "The influence of home teaching is enormous; all that the school can do pales before it. Let the mother add to the poet's rhyme the influence of her sweet and beloved voice; let the great works of fiction be read to the breathless groups of curly heads about the fire; and the wonders of science be unrolled; the thrilling scenes and splendid personalities of History be displayed. Children thus inspired may be trusted to become sensitive to the charms of literature long before they know even what that word means."

There are many phases of the question that must be left quite untouched because this paper is already too long. But as a conclusion let me briefly sum up certain of the changes that appear to me highly desirable.

There are many phases of the question that must be left quite untouched, because this paper is already too long, but as a conclusion let me briefly sum up certain of the changes that appear to me highly desirable.

1. The academic training of teachers should give them a wider and truer knowledge of literature, and the professional schools should import a clearer grasp of broad principles, rather than mere methods and devices.

2. Examinations should place a higher value upon reading as expressing the thought and feeling of literature.

3. Carefully selected lists of the best books for libraries and supplementary reading should be provided for all elementary schools.

4. Every elementary school should be required to spend yearly a certain minimum sum in procuring good books as now they spend freely for furnishings.

5. The state should, by a grant to every school, assist in this work.

KINDERGARTEN.

MINUTES OF THE KINDERGARTEN SECTION.

WEDNESDAY, AUGUST 14.

A.M.

The opening paper of the session, "Educational Value of Music" was read by Mrs. F. M. S. Jenkins.

A discussion followed, in which Principals Masten and Smith took part.

P.M.

At a Round Table Conference Miss MacIntyre, of Toronto Normal Kindergarten, gave a talk on Chicago Kindergartens, particularly those in connection with Professor Dewey's school, in which the idea of bringing the home into the school is emphasized as much as possible. A talk concerning Kindergarten games, discipline, etc., and some songs were sung by the Kindergarteners present.

THURSDAY, AUGUST 15,

A.M.

The election of officers resulted as follows:—

President—Miss M. E. MACINTYRE, Toronto.
Vice-President—Miss BARNETT, Winnipeg.
Secretary—Miss E. CODY, Winnipeg.
Directors—Miss C. NEWMAN, Vancouver; Mrs. PATTERSON, Truro; Miss CAMPELL, Vancouver.

Mr. Justice Burbidge's address to this section on "The Parents' Responsibility to the State," was read by Mr. Hay.

Mrs. C. E. Bolton's paper "Some Phases of Infant Mind, from a Mother's Point of View," was read by Miss MacIntyre.

FRIDAY, AUGUST 16.

A.M.

Miss Bolton introduced Miss J. Stocks, who gave a demonstration of the "Play Method of Teaching Music."

A vote of thanks to Miss Stocks and her pupils was proposed by Miss MacIntyre and seconed by Professor Cadwallader.

The meeting then adjourned.

THE EDUCATIONAL VALUE OF MUSIC:

Or, MUSIC AS AN INTEGRAL PART OF EDUCATION.

By Mrs. F. M. S. JENKINS, Ottawa, Ont.

In an institution such as this in which I have the honour of addressing you, and in connection with so thorough and earnest an organization as is the Dominion Education Association, it is hardly necessary, perhaps, for me to say that when I speak of Music as a part of education, I am referring to that true education defined by Herbert Spencer as the learning "how to use all of our faculties to the best advantage of ourselves and others." Spencer adds: "This being the great thing needful for us to learn is, by consequence, the great thing which education has to teach." Modern education is earnestly trying to fulfil that ideal, and with gratifying success, but when we look at the broad field described by "all our faculties," may we not question whether the development of the imagination, feeling, and sentiment is as much considered, in thinking of general education, as the culture of the more purely intellectual faculties? And would not a greater culture, and therefore control of the feelings and emotions, side by side with intellectual development, make us of greater use and of higher possibility to ourselves and others?

Art gives us study which taxes both the intellectual and emotional sides of our mentality. And of Arts, there is none possessed of more infinite possibilities than music. By its very intangibility it is harder to grasp than its sister Arts of Painting, Sculpture, and Poetry. In Poetry, thoughts are presented to us in a language which we know; in Music the language of sound is all unknown. It lives in the imagination of each, separately. In Painting, the figures which present a thought or situation, are figures with which we are familiar, however idealized to stir the feeling or emotion. In Music, the figures must all be wrought out of sound. By consequence, Music is an Art of later development than the others. We are living in the midst of its development, and are only on the threshold, for Music is so greatly unfathomed, perhaps unfathomable, that we can only see it reaching upward, and lose sight of it in the Infinite.

But it will be said at once that this music is for the few; that the large number of mankind cannot go so far as all this. Of course there are the talented,—those who lean naturally to the musical

expression of all thought—these will undoubtedly go the farthest, have the largest insight into the higher planes of music ; but, as we are none of us without the attribute which is called feeling, and Music and the sister Arts develop and broaden feeling, so, we all need art. Personally, I hold the view that some Art, if presented in its true form, will reach almost every individual, and give a basis on which to begin cultivation.

If presented in its true form –that is the important point. If we look at the music which represents our taste as a mass of people today, it cannot be said that it is largely enough presented in its best form. Music, to perform its mission, to elevate, refine, and cultivate high thought or feeling, must be good or real music ; that is, *it must be a worthy, beautiful, or inspiring idea, truthfully expressed.* In almost every house in town or country, a piano or organ is found now-a-days. And the compositions which lie on the rack, what are they? The large proportion are coon-songs, rag-time songs, "popular" songs, combining a little trashy sentimentality with a waltz refrain, two steps, Sousa's Marches I say the large proportion. I do not wish to be understood to say that there is not a constant effort being made by musically earnest teachers to raise the standard, but that there is an enormous proportion of this kind of music, lived with, in a large number of homes, and often in homes where we have reason to expect better things

Music is treated slightly at best as an accomplishment, further as a pastime, even as a medium for nonsense. (I don't know what other reason there is for the vast army of coon songs and such. They are simply nonsense with a jingling bit of tune to it,—very little tune, and sometimes the nonsense is a little vulgar. We know that it is, if we stop to think. Now, nonsense is an excellent thing sometimes, but I don't like to see a great and beautiful art known only to a people by such a deteriorated form as is found in these songs.) Most of the two-steps, marches, etc., have the same objection to them. They are a low form of an art whose aims are high, and if they do no other harm are keeping out better things and so degrading the taste as to kill the desire for better things. One of the worst forms of this barren and poor music is that of the "popular" sentimental song. I say one of the worst, because it works upon one of the precious heritages of youth—the natural feeling for the romance of love. This feeling should surely be kept as pure, as ideal, as lofty as possible. We might borrow from the birds some

of the joyous enthusiasm to be heard in the songs of mating time; or we have our own human ideals of romance—chivalry, fidelity and devotion. But these sickly songs are fulsomely redolent of false sentimentality; the music is vulgar and commonplace as a general thing, and when a little above that plane, has a false glamour which is anything but wholesome food for youth. Words and music are equally affected. Yet these are the songs which are sung over and over again by our young people.

In the matter of reading, we realise pretty generally now-a-days the evil of poor literature, and the necessity for placing in the hands of the young those books which will truthfully present life, will lead them to higher ideals, and generally refine the mind. Why do we pay no attention to the trashy music which fills the place of that Art in our young people's minds? We even allow this trash to go as far as our young children. I hear little girls everywhere singing over and over again all day, songs of the most miserable, worthless kind, songs especially obnoxious on the lips of children, who can have no part in them, in any sense. Unconsciously, is not this having its effect on the child-mind, spoiling its taste for true music, if doing nothing more evil? For of course all these excrescences, as it were, have nothing to do with real Music. They will not for one moment stand the test of being a *worthy, beautiful, or inspiring idea, truthfully expresssed.* They are untruth—absolute, hideous untruth—or else a plainly unworthy and unbeautiful idea. Surely we can give our children, at least, something to take the place of the natural desire for song in them, which will express the innocent, happy moments of childhood, something simple enough to make them feel it natural and sweet to sing about themselves and their own wonderful world. The Kindergarten steps in here and gives admirable examples of child-songs, but the Kindergarten influence will not last beyond the first few years of the child's life, and the same idea of making music an expression of something beautiful felt by ourselves, must go on through all the years.

Having done with "bad" music, or that which usurps the name of music, and really fulfils none of its laws of being, and coming to "good" music, I am afraid that there are some, who, though recognizing the fact that "bad" music is bad, secretly wish that "good" music were not so uninteresting. Many persons have the words "good music" connected firmly in their minds with long and tiresome performances on the piano, or oratorios which seem un-

ending and "all the same." They find, for instance, Bach and some of his comrades to have "no tune in them," and think that all "good music" is just like that. Let me say at once that "good music" is music (as we have seen) which expresses any worthy idea truthfully. Not necessarily a solemn, grave, or ununderstandable one, Look at all the dances—Spanish, Hungarian, Slav, Russian, Polish : look at the folk-songs ; the national airs—the Norwegian, the German, the Irish, the English, the Scotch, or our own French-Canadian (and I wish that we looked at them all more, and knew them better). And there is no excuse for singing poor songs with the legion of beautiful songs to be had. There are compositions for all temperaments, grave and gay, all good music, truthful to their ideal.

There are reasons why all composers, and some of them, the greatest, should not appeal to all minds alike. It is as in literature —one, perhaps, does not care to read Browning's poetry, or finds Carlyle heavy, and delights in Sir Walter Scott's novels. Another finds no special interest in Scott and Dickens, but is roused by Tolstoi and Bjornsen, while a third finds modern thought too crude and harrowing in its realism, and takes his delight from Shakspeare. We have each his own particular taste, and no one is coerced into holding the opinions of another. The same is the case in music, and nobody should be foolish enough to try to like, or pretend to like that which he honestly cannot.

But sometimes the trouble is that the beauties in the works of the great composers do not reach us. The mind is not able to receive them. If you read to a child Keats "Ode to a Nightingale," he will not grasp all the beauties of it, but when that child has grown and developed mentally, he may find that an example of the most exquisite poetry. Study the meaning or inner self of the great composers for a few years, and you will find beauties revealing themselves to you of which you had never dreamed, and a new world opening still farther on, inspiring to further effort.

There is another reason why good music sometimes fails of its effect on listeners. It is that the performance, the expression of it, is not good, not adequate. In the acquiring of the technique of an instrument or the voice, it is, unfortunately, often the case that all the cultivation is brought to bear on the one side of obtaining skill, —mastery over the mechanical difficulties. Side by side with the growth in power over mechanism, depth of feeling and understanding have not been fostered and developed. The result is that the per-

former may play or sing a great composition with the requisite proficiency, but where is the composition? The soul or life of it is not there. It cannot appeal to any one, and necessarily it does not. Then the hearer thinks that he does not like "good music." The performance is here at fault, not the music. The beauty of that is there, but unrevealed,—waiting, ready for the finding.

And in speaking of the study of music, let me say, that I wish that we did not feel confined to the piano and singing. There is a great field in the study of other instruments, not sufficiently worked. From experience I know that boys can be interested in the violin, viola, cello, flute, clarinet or cornet, who could not be persuaded to spend fifteen consecutive minutes at the piano or singing. Two or three or more of these instrumentalists, playing together can get an insight into some charming and delightful music, and that without exceptional skill at each instrument. Part singing too is one of the most thankful forms of musical culture, and one which choirs and choral societies afford an opportunity of developing. But part singing, at home, of glees, rounds and catches, is not enough cultivated and is worthy of more attention in the pursuit of the true benefit of the study of music.

The one great aim to be kept before us is that all music should be real and true art. After that my only plea is, that the cultivation of it should be more general. As I have said before, there is too much of the feeling among many, that music is for the few. From my personal experience, I believe firmly, that a love for good music, and therefore a degree of talent for it is general, and almost universal in Canadians. It needs rousing and stimulating certainly, but it is there. Quite often persons in middle life have told me that they had considered themselves utterly unmusical, as, in fact, outside the pale of musical sensibility, until one particular performance had opened their eyes and revealed them something in this tonal world that they had never grasped before. *In every case* it was a great or noble composition. With one, it was the hearing of a Wagner opera. A perfectly unmusical man on hearing these operas became quite enthusiastic. He said "I had never paid much attention to music before, but this took hold of me. It was magnificent, and I enjoyed it to full." Another was a man of fine mind, who however had never come in the way of great music. On hearing a composition of Brahms, he said "That is wonderful, that music, it is like a lofty conversation." Another exceedingly cultured young man was

struck by the beauties of a Beethoven Sonata. He said "I thought that I didn't like music, but I find that I can enjoy that. I seem to appreciate it from a literary point of view."

It will be noticed that each used the word "enjoyed." But does it not seem that when a responsive set of faculties are stirred to the depths by a great musical composition, that that is something more than enjoyment—a state of pleased, or delighted senses?

Can we not infer that the Art which rouses our highest emotions, appeals to our imagination, suggesting new and unexplored beauties, or can fill us with a solemnity only to be likened to the mysterious awe of the great Universe, is improving to the mentality, leading it to higher planes? And is not such an Art to be cultivated and fostered in the building of our nation? We Canadians are a hardy, earnest people, of deep feeling for the most part, full of tenacity and fire. Our fathers made this land by hard work. They had to face the hardships and privations which fall to the lot of those who win bread from the soil. They surmounted their difficulties and laid a solid foundation for a great people. We have proven our ability in various fields to stand equally with the men and women of other countries. It remains for us now to accept the responsibility of building up the nation. What kind of a nation it will be depends largely on the mental training—the education—which we shall give to our youth. We have not yet fallen into the snare which seems the most alluring to young countries—that of valuing only material interests. But as that is the great danger, let us see that education shall broaden our feeling, our sentiment, our imagination. Art, then, must be one of the recognized means of attaining this goal; and the Arts stand incomplete without Great Music. My own hope for Canada is that she may be known in future years as the home of a people who live with and love *good Music.*

THE PARENT'S RESPONSIBILITY TO THE STATE.

By the HON. MR. JUSTICE BURBIDGE, Ottawa.

Mr. Chairman, Ladies and Gentlemen—

I have been asked by my good friend Dr. McCabe to write a short paper on "The Parents' Responsibility to the State," limited, of course, to the subject of education.

Now, it is obvious that in approaching this subject it is necessary in the first instance to keep in mind the objects aimed at in the education of children and the relation of the State thereto

What, then, are the main objects to be kept in view in the education of the young? First, to train the mind; secondly, to impart useful knowledge; and thirdly. to strengthen and build up character. Of these the last is, I think, the most important; and of the other two, the one or the other will be considered the more important according to the standpoint from which it is regarded; and as we attach the more importance to the one or to the other will we differ as to the subjects that ought to have most attention in our schools.

If I may venture to speak for myself I would like to say that for some years after leavlng college it seemed to me that too much time was taken up with the study of Greek and Latin, and the higher mathematics, and too little time given to studies in which one might acquire knowledge of which he would make a more direct and practical use in after life.

But years and a wider experience and observation bring me back to the view that, after all, the training of the mind to do its work thoroughly and with exactness and precision is of more importance than any information or knowledge that may be gained during the years that are spent at school and college or in the university. I hold this view with all deference to those who think otherwise; or who think that the same training and discipline of the mind may be obtained by the study of subjects with which the scholar will come into more direct contact in his work after leaving school. And I am ready to concede that my views may be influenced by conclusions that I have formed with respect to the profession to which I belong. For the lawyer it is, I am sure, more important, and I think the same thing may be said of the man of affairs, that his mind be trained to grasp and master any of the diverse subjects

that may be brought before him than it is that he acquire while at school special knowledge of any given subject. How far the same may be true of other walks of life I leave to those more competent than I am to form an opinion. And where it is a question of training the mind, there are, I think, no subjects of study more useful or advantageous than mathematics and the classics. But, having said that, it must be conceded that any study, any thorough persistent application to any subject will afford training and discipline, but to be of advantage it must in any case be thorough.

And here perhaps better than anywhere else I may venture to say that it is from the standpoint of the training of the mind that the work of the Kindergarten is of such pre-eminent importance in the training of children. In Ottawa we are in this respect very fortunate, and owe a debt of gratitude to Miss Bolton for her painstaking and successful work in the initial training and instruction of our children. Manual Training also derives some of its importance from the same view of the subject. For to train the child to use his hands with precision and exactness is to train his mind. The members act by direction of the mind and under its control, and they do not exhibit skill, exactness, or grace, except as they are directed by atrained mind.

With respect to imparting useful knowledge, will you permit me a moment to say that nothing seems to me of more general importance than that our children should be taught to read, speak and write well the English language. It is not possible that too much attention be given to these subjects. It is possible that with the multitude of subjects with which the minds of children are I fear sometimes distracted rather than trained, too little attention is given to these subjects. These, and a knowledge of Arithmetic are, taking the subject in a large way, and as it affects the greater number, the most important subjects to which the attention of our teachers can be given. Sometimes I fear, especially in the advanced classes, they they are overlooked. It seems to be too readily taken for granted that they have been mastered in the lower forms, when as a matter of fact they have not been mastered at all, and much remains to be desired and earnestly sought after.

I have said that a third object of education is to strengthen and build up character, and that of the objects aimed at in the education of our children this is the most important, for of what advantage can it be to train the mind, or to acquire knowledge, unless the

character be good? To develop and build up the best and highest character to which one can attain is the great end and ultimate object of the life work of all, and that, too, at the commencement of the child's career should be given the first and most important place.

These, then, being the main objects to be kept in view in the education of our children, what is the relation of the State to the subject of education? It is not necessary, I think, in the presence of those to whom this paper will be read, to enter upon any argument to prove what a writer on Political Science has stated that he trusted he had made to appear (1) that "no parent has a right to withhold an education from his child if it be within his reach; (2) that a community has the right to make compulsory the education of all the children within its territory; (3) that thus it becomes a duty or at least may be a duty of a State to establish a public system of education; (4) that the right of free teaching ought not to be invaded by any State laws or any system of State teaching."

Now, that being the State's office and duty in respect of education, the parent has of course a responsibility in every way possible to aid and support the state in the efforts it may wisely put forth. That is a parent's duty, not only as a parent but as a citizen of the State. And he should realise that the teacher in a large degree stands in his place, and exercises a delegated authority. Not only should he realise this himself, but he should make sure that his child realizes it, and he should be careful to support and sustain the teacher in the just and wise exercise of that authority.

How far the parent should seek to supplement the teacher's work in training his child's mind and in imparting to it useful knowledge must depend upon circumstances. No child should be given more to do than he can fairly do; and he should have his hours of recreation as well as hours for work. But, speaking generally, it is, I think, the duty of the parent, if he or she have the time therefor, to know from day to day, or from time to time, what work his child is doing, and to see that the child's mind is being developed, trained, and disciplined, and that he is growing in knowledge. But whatever view we may take as to the parent's responsibility in this respect, there can be no question as to his duty to be earnest and constant in the work of moulding his child's character. Under our system of public schools the teacher is, in respect of the moral training of the children under his charge, in a measure the agent of the State, and may be thought to be limited in his work and action by

the limits that should be set to the State's action in respect thereof. That it is the State's duty and his to inculcate such principles of morality as have to do with the State's highest interest, such as honesty, chastity, temperance, truth, the evil of revenge, obedience to law, respect for the rights of others, and love of country, there can be no doubt. That is said to be clear by the writer to whom reference has already been made. He adds, and the example is one of importance, that "The State of Massachusetts in one of its constitutions declares it to be the duty of teachers of schools to impress on the minds of youth 'the principles of piety and justice and a sacred regard for truth, love of their country, humanity, and universal benevolence, chastity, moderation, and temperance, and those other virtues which are the ornament of human society and the basis upon which a republican constitution is founded.' 'Moreover,' it is added, 'it shall be the duty of such instructors to lead their pupils as their ages and capacities shall admit, into a clear understanding of the tendency of the above mentioned virtues to preserve and secure the blessings of liberty, as well as to promote their future happiness; and also to point out to them the evil tendencies of the opposite vices.'" In this respect the parent's obligation is, it seems to me, greater and more diligently to be observed than even the teacher's, great and exacting as that undoubtedly is.

But I may not leave this subject of the cultivation of character without adding that, happily, we are for the most part agreed that that character is the highest and best that is most Christ-like. Unhappily, however, we are not all agreed as to the religious teaching best adapted to gain such a character; and therefore the teacher in a public school is greatly limited in what he may impart pertaining to the Christian religion in its relation to life and character. Here the parent's responsibility is imperative, and scarcely, if at all divided with the teacher.

In conclusion I would like to add what is no doubt obvious, that a parent, or one who stands in the place of a parent to a child, has not only a parent's responsibility to the child and to the State in respect of the education of the child, but he has a citizen's responsibility as well; and that, I venture to think, was well summed up in the words of a very noble and distinguished English statesman, cited in a late number of "The Nineteenth Century," when he said, "We must one and all fulfil our due part in the great national duty of providing, not for our sons and daughters only, but for all the sons and daughters of our country, the noblest education, the best training, and the finest discipline that the wit of man and the love of God can together produce and inspire."

SOME PHASES OF INFANT MIND.

By Mrs. C. E. Bolton, Bellwood, Ont.

What a world of possibilities comes to the mother, who for the first time takes into her arms the new-born infant, fresh, as it were, from the presence of God. To the true parents who welcome their first born into the world, the future appears to take a new and wider outlook. The love of pleasure and self-indulgence gives way to a spirit of willing self-sacrifice, all their hopes and aims centre around this new life, which has been committed to their care, a pledge of mutual love and loyalty. "How shall we order the child, how shall we do unto him?" they wisely ask.

Their ideal of the greatest good in store for that child in manhood or womanhood will chiefly govern their ministrations to, and training of the little one; the patient persistence and faith with which that ideal is pursued will determine largely its ultimate achievment. If wealth or worldly power be the ideal of the parents, their principles will soon be imbibed by the child. If the ideal before the parents be to develop a mind which shall not only be able to take in and appreciate all the beauty and love that God has bestowed upon us, but also that character, which goes out beyond the person and is able to give of itself to others, to reach from God to all humanity, such ideal will be seem in the child's life.

The first impressions to the infant come through its physical needs, as the sense of taste, through the satisfying of hunger; of feeling through the experience of warmth, of restfulness and comfort from cleanliness and fresh clothing. The awakening mind is responsive to purity and pleasantness of surroundings. The old theory we often hear, that dirty children are the healthiest, is only true in so far as the untrammeled exercise, the fresh open air, the working and playing in Mother Earth, is a child's God-given right; and it is better for the mother to put up with outward dirt for a time than render herself and the child unhappy by the strain of keeping spotless. But it is not necessary to remain in the dirt and the youngest child will soon learn to love its bath and clean clothes and to enjoy the experience of being clean, however brief that experience.

There is such a close connection between body and mind, that it is hard to draw the line between physical and mental impressions, in the earliest weeks of infancy.

The community of feeling is first developed between mother and infant by the meeting of physical needs, by the comfort of resting in loving arms, and further by eye and ear, by responding to the expressions of interest and sympathy or playfulness in face or voice, or listening to the lullaby songs. We have but to notice the difference of expression and intelligence in the face of the babe brought up in neglect or by hireings, and that of one in the love and life of the real home where Baby is the centre of interest and attraction.

It is true in the latter there is sometimes dangers of unwise stimulation of self-consciousness and of the nervous forces, that will soon rob the little one of its chief charm of innocence and modesty. As soon as by unwise repeating of its clever little sayings or doings, it begins to do things for the sake of effect, and often before it can walk or talk, the seeds of affectation may be sown in the character of the babe.

As we desire genueniness and true courtesy in our growing boys and girls, must we impress upon them, by the wise appreciation of their efforts, that to give pleasure to others not to win praise or create a laught should be their motive in any attempt at singing, playing or reciting. A very young child soon learns to read faces and to be influenced by motives.

One of the first active forms of development in the infant is that of imitation. He can soon be taught to clap his hands, to jump, to to play peek-a-boo, from crowing and purring to formulate sounds after others. The first vouluntary intelligent word is usually the name of one most loved. The power to associated ideas usually shews itself in the second year.

From two to three the mind usually develops quite rapidly through the never ending activities of body which ever leads to make fresh discoveries. The acquisitive faculty begins to develop from the time he can hold an object in his hand. Mind and body are strengthened by exertions to attain new objects, first by reaching with the hand, then by creeping, climbing stairs and walking. This is in line with natures' own law; to make fresh discoveries, to acquire wealth, to open up new lands to commerce, the man is only following up the spirit of the toddler at his mothers knee.

Boys are often more stirring and active, even as men are usually leaders in such enterprise, but there are exceptions to all rules, and girls in planning and management, as leaders in games, in showing

the mothering instinct, often exercise the strongest influence. This untiring restless spirit of the child is often very trying to his elders who love quiet, or to any who may be nervous or lacking in sympathy with young children. He is often scolded or punished for naughtliness, when he is only following the natural but unguided instincts of an activity, that must find vent in something with no thought of harm. A little time and patience in guiding his play, teaching him to be creative rather than destructive, to win his co-operation in helping rather than hindering, brings its reward to the mother.

Boys, as a rule, love a horse. From riding their father's foot, they ride canes and sticks untiringly. The imagination, which usually develops quite rapidly in the third year, manifests itself through imitation and association, in many ways that are most entertaining to the older friends who may be silent spectators of the pranks of the little ones. The girl loves her dolls, or picture-books, she plays house and has tea-parties, where with dignity she presides, entertaining her friends; in our home in two cases twin brothers were the favoured guests.

But the future life and character is foreshadowed here, and opportunity given, which the wise mother will avail herself of to impress lessons in neatness, order, courtesy and unselfishness. It is well that from the earliest age they should each have some little duty to perform day by day. At first the orderly putting away of toys and clothes. Soon they will want to help in house or garden, and it is well to allow them to, even if the teaching and care they need involves a good deal of trouble. These habits of order, industry, and thrift they will thus acquire will be invaluable to them in after life. To train a child to concentrate its mind on the one thing in hand, whether in play, in work, or study, is one of the most invaluable lessons parent or teacher can give. A disorderly mind is as great a bane and cause of failure in any calling of life, as a disorderly house is to the happiness and success of the home. Mr. Gladstone's daughter attributed the marvellous mental resources of her father to the fact that his mind was in as perfect order as his library, where he could lay his hand upon any book or article he wanted in an instant. As an absent housekeeper often involves a disorderly home, so an "absent mind" often involves a disorderly mind. To gain that self-control that enables one to concentrate all the powers of mind upon the duty in hand, whether it be one thing, or to be on the

alert when necessary to meet other calls without forgetting the first, is one of the most necessary equipments to practical success in life. It is true great geniuses are often absent-minded from the concentration or absorption of the mind with one theme, but such often fail in the practical details of life. The power of controlling the mind by the will, to overcome dreamy, abstracted habits, is greatly helped by training the perceptive faculties from infancy. There are many games that arouse this alertness, as "hide-and-seek," "hide the thimble," and later "authors" and "checkers" that demand constant attention. To question them, as did our forefathers, on what they have heard in sermon or lecture, or in the family reading, helps to give the habit of attention. To talk to them of what they have noticed of beauty or novelty in their play or rambles, to send them in search of some flower or plant or bird, is excellent training.

Obedience can only be secured by patient untiring efforts in the little details, and from the first, rather than by severer measures in the more flagrant offences. True liberty in the home, as well as in the nation, can only be secured by that self-control which is developed by habitual obedience to the highest laws. The great mistake made by most parents is to confound firmness with harshness. He who can best combine kindness and sympathy with an unswerving will in the path of right, who can win the child's co-operation in desiring to do right, because it is right, is the most successful disciplinarian. But where this tact and wisdom is lacking, it is better to secure obedience, if necessary, by corporal punishment. We should aim to learn the "more excellent way," but even a whipping may be given so as to impress the child with the love of the parent.

As the babe in the home is a constant appeal to the better nature, to the feelings of love and patience and sympathy; as it helps to banish care, and often discord, by its innocent mirth and the needful attention it takes, so those parents who continue to give to their little ones this sympathy and interest as they develop from infancy to childhood and youth, by guiding and sharing in all their interests, renew their own youth, and will have little need to fear after they have left the parent nest. The love of God and child-like trust we would implant in our children's hearts, is well begun by opening the eye and mind of the child from earliest infancy to the beauty of God's world as seen in sunshine. flowers, and birds, in the blue sky with moving clouds, or flowing river. The parents who

can take a little time each day to open their own and their children's minds to take in of the beauty and love the great Father-heart has bestowed so richly upon all, are bringing them into a grander and more satisfying heritage than to leave them millions of gold. To develop this community with Nature, so that the child shall be able to realise the love and life of God, in all animate Nature, as well as in the love and sympathy of father and mother, who are ready to forgive and receive back the child after any wandering, is to lay the foundation of all true worship, as well as of that vital union with God which brings into true sonship.

The foundation stone of all real life, or of success in life, is faith ; faith in God, that gives faith in man and in oneself, not presumption, or a weak credulity, which will run after every new fad or doctrine, but that trust in the eternal principles of right, which wins the confidence of others. As we desire our children to reach this strength and largeness of soul, we must be worthy of their confidence, and show trust in them, even when they show a lack of conscientious interest where we think we have a right to look for it. It is better to use wise firmness in dealing with disobedience or selfish lack of thought than to impute to them motives of dishonesty. From my own experience, with six children at school from the primary to the third form of the High School, I can say that those teachers who have shown most interest and confidence in the children, have best forwarded their studies, and commanded their respect. Two teachers who were distrustful and fault-finding failed almost entirely.

It is the men of faith who have been the leaders of mankind. The 11th chapter of Hebrews might be continued to the 20th century with names of noble, self-denying men and women, who, led on by high ideals, exercise that faith that is daunted by nothing till that ideal, perhaps not the gold-tinted one of youth, but the more enduring one of experience, be finally reached. He who is swayed by circumstances, and takes the position "I have never had a chance ; everybody is against me," is a weakling, but he who will leave his impress upon society will make of adverse circumstances the stepping stones of more earnest endeavor to final victory. Mothers, the training of such is in your hand !

When we shall be able to inspire our children with the strength of high-souled principles, so that "Is it right," rather than "Will it pay ?" be the ruling motive of life, when we come into that largeness of faith and hope and of interest in humanity, then shall we become a nation whose bulwarks are truth and righteousness, but these foundation principles must be laid in the Christian home, and in the earliest years of childhood.

PLAY METHOD OF TEACHING MUSIC.

By Miss Jean Stocks, Ottawa.

I can assure you I feel it a great honor to appear before such a learned assembly and particularly such a critical one—for teachers are considered critics and justly so, but please let your criticism be tempered with mercy. I appear before you at a disadvantage as at this time of the year children are generally enjoying themselves and thinking of anything but studies. My own class is scattered to seaside and other resorts, but I have been able to secure seven children belonging to Miss Sorley's class, a young lady who studied my method and has taught most successfully since Christmas. These little people have been kind enough to come to my rescue to help me in any way they could. Some have had only three months, some three lessons.

The aim of the Stock's "Play and Elementary Music Method" is to give children a thorough musical training and to make the study of music a pleasure instead of a task:

(1) It enables a child to read music readily.

(2) It gives the child a practical knowledge of the value of notes.

(3) It gives a practical knowledge of formation of scales and chords.

(4) The technical exercise on Octometer develop the muscles of the hand so that the child finds no difficulty in using the piano.

(5) It cultivates the ear, the child readily learning the different intervals of sound. All exercises are accompanied by music.

I first teach in my method the staff, that lines and spaces represent pitch and time by notes. W. H. Cummings, of London, England, uses this method in his admirable book on Rudiments of Music—a text-book universally used in Ontario. Elementary books on Music usually begin with the formula "Musical sounds are represented by characters called notes." Yet it would puzzle any one to define the "sounds represented by whole, half, or quarter notes, apart from the staff. So following in Mr. Cumming's footsteps, I prefer to regard the notes as representing duration only, and the lines and spaces as the musical instrument, silent and mute and ready to give forth sweet sounds, whether touched by a flying 16th or a whole note long drawn out. Now we can go further back than W. H. Cummings for this method for we are told in histories of music that in the eleventh century, Guido D. Arezzo added two

more lines to the staff which had only consisted of two, making four lines, the second of the four was red, the fourth yellow and sometimes green. The red line fixed the tone F, the yellow the tone C, from this dates the use of the Bass or F Clef and the C Clef. Some writers say this is falsely described to Guido D. Arezzo, but he might as well have the honor and glory as any other. After that we had the great staff which was afterwards divided—the upper five lines for the voices of women and children, the lower five for men and boys. Now the Treble sign was originally made to resemble a G, and fixes the second line G. The Bass sign was originally made F, and fixes the fourth line F. We cannot give any note an alphabetical name, and to me it must be confusing to a child to be told that sometimes a note is E, and then G.

Pupils of ages from five to fourteen thoroughly enjoy this method as they are taught the staff, time intervals, scales technique through games and songs set to music. Some years ago I read of a game of living chess, and from that idea developed my play method of teaching music. In connection with this idea of teaching through play, I beg to read an extract from the Popular Science Monthly, February, 1895, written by President E. Stanley Hall, entitled "Play and Study." He observes "that practically we have to act as if there were no such thing as pure thought. Children have no thought without motion. Motion and thought go together, and if you make them sit still they cannot think ; their minds will not move unless their bodies move along with them. We weaken thought if we try to eliminate motion." "In child study at the summer schools," he says, "one thousand children's games were selected and studied. Arithmetic games, geography games, and those that give strength to shoulders and hips—and we had everything that was taught in the whole grammar course without any exception, and a good deal more. We cut down the games to 150 or 200, and found that everything could be taught by historic plays and games. Then we studied history of games, and found that education used to be play, and that now it is hard work."

MEMBERSHIP.

Attwood, A. E., Ottawa.

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Bridges, H. S., St. John. N. B.
Bridges, H. V. B., Fredericton, N. B.
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Masten, Mrs. G. L., Odelltown, Que.
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Pilson, Miss K., Toronto.

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Robins, S. T., Montreal.
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Tennant, Miss B., Brockville, Ont.
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Truell, W. T., Lachute, Que.

Walton, Jno. L., Hull, Que.

Young, A. H., Toronto, Ont,

RECEIPTS.

1898			
	Balance on hand	216 05	
	Less Exchange	54	
			$215 51
April 26	Contribution of British Columbia		100 00
July 19	" the Province of Quebec		200 00
Aug. 1	" Nova Scotia		500 00
Aug. 3	" New Brunswick	250 00	
	Less Exchange	63	
			249 37
Aug. 5	Membership Fees		694 45
Oct. 13	Contribution of N. W. Territories		100 00
Nov. 1	Refund for unused ticket, A. C Whitney Tow Boat		1 00
			$2,060 33

Educational Association, August 14th, 1901.

EXPENDITURE.

1898			
Aug. 5	Educational Review, printing	$ 2 50	
	H. W. Barnes, advertising in Witness	6 00	
	Gordon Keith, hire of chairs	45 00	
	The Wesleyan, adv	3 10	
	The Canadian Educational Monthly, adv	10 00	
	The Educational Publishing Co., adv	7 50	
	A. & W. MacKinley, books	1 89	
	Telegraph Publishing Co., adv	20 00	
	G. W. Hay, adv. in Educational Review	31 75	
	Morning Herald, P. & P. Co., adv	22 00	
	G. Creighton	80 22	
	John Starr & Co., electric fittings	1 00	
	T. C. Allen & Co., stationery	20 94	
	Halifax Tow Boat, Ltd	26 25	
	Blackadar Bros., adv	10 00	
	Nova Scotia Printing Co., printing	54 10	
	T. Price, janitor of Dalhousie College	15 00	
	Dartmouth Ferry Co., excursion	50 00	
	Rod. McDonald, N. S. Nursery	10 00	
	A McKay, services	456 72	
	Rent of Orpheus Hall	15 00	
	Rent of Academy of Music	80 00	
			968 87
Nov. 8	A. MacKay, to pay the following accounts—		
	J. H. Treffry	1 50	
	N. S. Furnishing Co	3 40	
	Echo, adv	1 00	
	Morning Herald	75	
	Maritime Baptist Pub. Co	2 40	
	Charles Annand	20 00	
	Sun Printing Co	16 25	
	Freight	1 66	
	W. W. Stetson, expenses	37 20	
	W. W. Walsh	25 00	
			109 16
June 20 '00	Nova Scotia Printing Co., for printing Reports		800 50
Aug. 14, 01	Balance on hand		181 80
			2,060 33

It is to be noted that this Statement does not include any of the receipts for the Ottawa Convention, which must appear in the next Statement.

OTTAWA, 7th December, 1901.

Having this day audited the accounts of the Dominion Educational Association, I declare them to be correct.

Total Receipts	2,060 33
Total Expenditure	1,878 53
Balance	181 80

JOHN A. DOBBIE.

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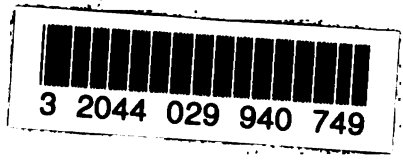

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